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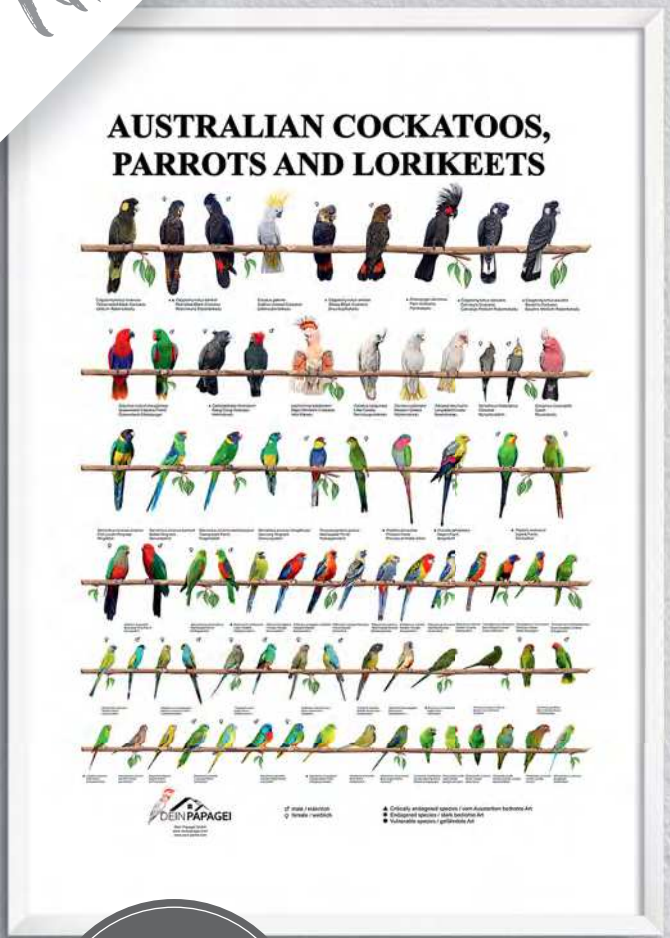

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PETER ODEKERKEN

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editor's notes

FROM EDITOR & PUBLISHER
SHERYLL STEELE-BOYCE

ONE of the most popular macaws is the Blue and Gold but a number of the larger macaw species are gaining popularity. The Scarlet-chested and Green-winged are also readily available in Australian aviculture. Research is the key to finding the right macaw species and individual or pair for you, whether as a handreared pet or breeding bird. Correct housing and flight space, food and time are major considerations. Jade Welch presents some thoughts on page 245. ***ABK*** has sold out of its excellent title, ***A Guide to Macaws as Pet and Aviary Birds*** by Rick Jordan and Mark Moore, but we are considering a short print run if there is sufficient interest from keepers. Contact us on birdkeeper@birdkeeper.com.au.

The Glossy Black Cockatoo has presented a challenge in captive breeding. Noddy Connors and her late husband Neville developed a specific diet and established success (refer to ***A Guide to Black Cockatoos as Pet& Aviary Birds***). It has been a passion of ornithologist and photographer Jayden Gunn to research and monitor this species in the wild. He has some valuable information to share on page 250.

With a focus on finches this issue, we begin with David Pace's article on Gouldian Finches and his personal breeding experience and records on page 254.

On one of his many travels, Peter Odekerken met breeder Tony Arnold in Townsville, and was intrigued (and indeed envious) of the state-of-the art facility Tony has provided for his finches. Tony is also meticulous in his dietary provisions—read on page 252.

Peter has also written on and photographed many species of African Firefinches, including the Red-billed, available in Australia. On page 270, Peter's lovely images support his article, along with photos by Nigel Voaden of the rare Chad Firefinch and the Black-faced Firefinch.

The National Finch and Softbill Census is a vital initiative, collecting species data voluntarily and anonymously from breeders. It is particularly important to know what species may be in the hands of few so we can concentrate on maintaining them in Australian aviculture. Gary Fitt reports on the latest data and urges more breeders to take part in the upcoming census later this year on page 285.

Save the Gouldian Fund volunteers have just completed a wild Gouldian count at Wyndham, in East Kimberley. Counts in 2020 and 2021 were ceased due to COVID restrictions. The population estimate is significantly increased on previous counts, with an average of 1700 Gouldian Finches counted over 10 sites per day. We look forward to a full report.

Kit Prendergast tells us just how smart this Australian softbill is, supported by great antics captured on film by the Magpie Whisperer, who focusses on this species in her backyard. They should be called mischievous magpies! See page 264 for a bit of intelligent fun!

What causes disease in your birds? How can you tell if they are sick? How can you stop the spread? These questions and more are covered by Dr Bob on page 268—quick action is the key to managing an outbreak.

Rosemary Low writes on the bias of sexes, with breeders reporting more females than males in many species. She has also released an updated version of her *Pyrhurra* book—an extensive revision, featuring numerous new images and maps—see advertisement in this article on page 262. ***ABK*** is ordering just 10 copies due to its higher price as a result of increased freight and production costs in Europe, so get in quickly to get yours!

Recently Ron Hunt introduced me to Oxley Common in the Brisbane region. I was unaware of the vast extent of the area, stretching along some 70km of Oxley Creek and through 28 Brisbane suburbs. Originally a rubbish dump, it has been restored and is occupied by approximately 25% of Australia's native species. Thanks to Ron and his photography, supported by images taken by son Gary, and Glenn Roman—see page 278.

On the other side of the world in northern Germany, Lubomir Tomiska revisits the largest bird park in the world at Walsrode. He says this fantastic bird park should be visited by every bird-lover and garden enthusiast in their lifetime—see page 274. Vickie Lillo, meanwhile, provides an insight into the work of the Alaska Raptor Center, which has provided striking images of the Bald Eagles and other raptors they assist on page 282.

We present some new books (see inside back cover), and posters of popular Australian birds (see inside front cover). These provide great gift ideas. Plan well as our December/January issue will be released on the postal cutoff date and some stocks are limited.

Wishing you all success with your breeding birds this season!

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AUTHOR & PHOTOS
JADE WELCH

Scarlet Macaw at Birds International Inc
PHOTO BIRDS INTERNATIONAL INC

Keeping Large Macaws

IS MORE THAN A DREAM

THE word macaw has an allure to it. Even for those not really interested in birds, the word conjures up images of a bright and beautiful parrot with a large beak and long tail. Such is the exotic appeal of these birds that they are often used in advertising, as ambassadors for conservation and more.

It was not all that long ago that owning a Blue and Gold Macaw was just a dream and had to remain so for many people. But these birds are now readily available in Australia. There are even mutations in Australia of the Blue and Gold, including Blue, Lutino, Isabel (Faded) and Opaline.

Of the large macaws, this is the most readily available and the easiest to breed. This article provides a general overview to keeping the large macaws. In future editions I will provide more in-depth articles with contributions from various Australian breeders, detailing individual species' care and breeding. However, if reading this article inspires you to find out more about caring for large macaws, I recommend grabbing yourself a copy of the revised edition of *A Guide to Macaws and Aviary Birds* by Rick Jordan and Mark Moore, published by ***ABK***. (This title is out of print currently, however if you contact us on email birdkeeper@birdkeeper.com.au or phone 07 55680011 we can place you on back order for a small print run).

Blue-throated Macaw and a Scarlet Macaw at Bird International Inc
PHOTO BIRDS INTERNATIONAL INC

Buffon's Macaw

SOURCING

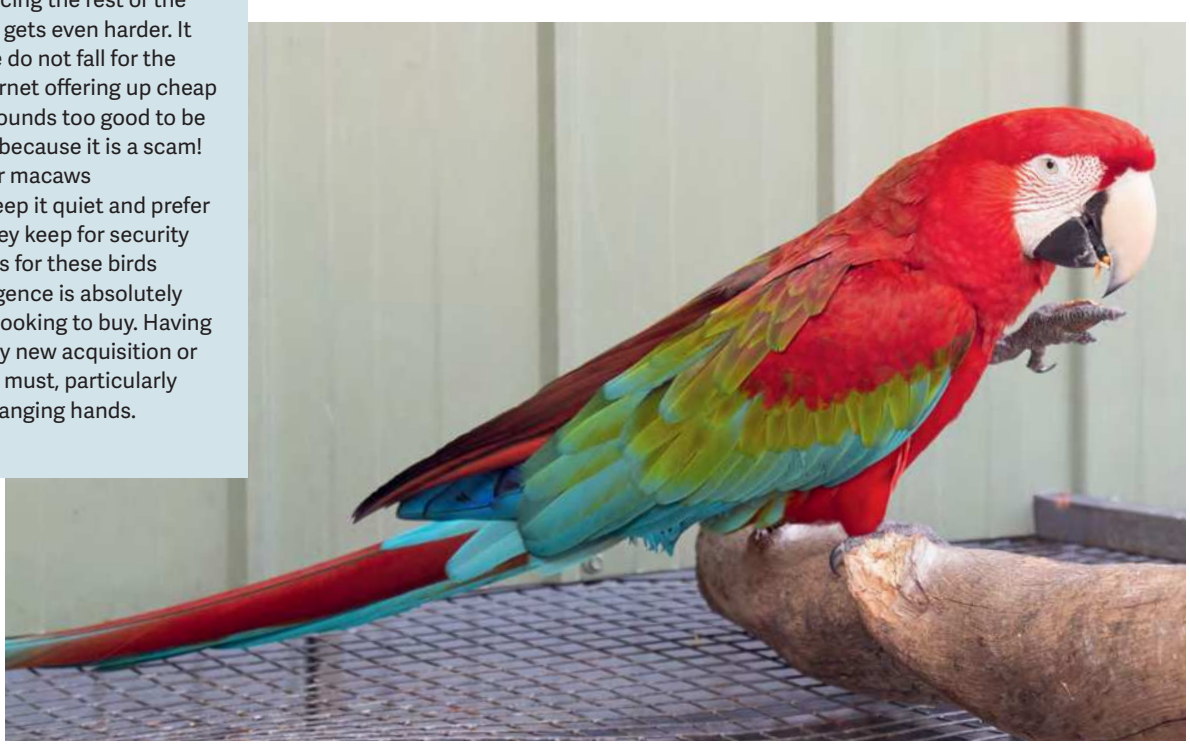
So, which members of the large macaws are represented in Australian aviculture? The most common are the Blue and Gold, Green-winged and Scarlet Macaws. Still considered extremely rare are the Military, Buffon's (Great Green), Blue-throated and Hyacinth Macaws.

Sourcing of species such as the Blue and Gold or Green-winged Macaw is not that difficult. Flick through the classifieds in the back of ***BirdKeeper*** magazine and you will see them advertised regularly. Scarlet Macaws are not that difficult to find either, but these days people are more aware of the subspecies and looking to keep them true to type. A lot of searching for the perfect bird may be required, especially because in the early days many of these subspecies were interbred.

When it comes to sourcing the rest of the birds on this list, the job gets even harder. It is important that people do not fall for the many scams on the internet offering up cheap macaws, eggs etc. If it sounds too good to be true, chances are that's because it is a scam!

Breeders of these rarer macaws understandably often keep it quiet and prefer not to display all that they keep for security reasons. Advertisements for these birds will be rare, and due diligence is absolutely essential when you are looking to buy. Having an avian vet examine any new acquisition or possible acquisition is a must, particularly where big dollars are changing hands.

Scarlet Macaw juvenile



Green-winged Macaw

HOUSING

The large macaws can be housed in either suspended or conventional aviaries. It is important that the aviary gives the birds sufficient room to fly, and an area to retreat under cover away from the elements. Macaws love to bathe and will hang from the wire enjoying a rain shower, and similarly relish the spray of a sprinkler.

The large macaw beak is particularly powerful, with species such as Green-winged and Hyacinth Macaws cracking macadamia nuts with ease. As such, it is imperative that a durable wire is used in aviary construction. Unfortunately, these birds at times turn their attention to screws and pop rivets, so this must be watched for.

Understandably, any wooden additions to the aviary such as perches may be destroyed rather quickly, so having a supply of replacements on hand is ideal. Some breeders purchase non-treated non-toxic hardwood from the local timber store to use as perches.

Some macaws show a tendency to climb about the aviary rather than flying, so this may need to be considered when designing an aviary. A minimum aviary length of 8–10m will give the birds room to fly. However, consideration must also be given to the width of the aviary, as it is important to allow the birds to fly side by side without issue.

Ease of Access

As large macaws can become aggressive during the breeding season, having the nesting box positioned in a walkway at the rear of the aviaries will allow for inspections without the keeper entering the aviary. Unfortunately, it won't prevent hormonal adults entering the nest box in an attempt to protect their eggs and young.

A good-sized door to the walkway allows you to enter the area and perform duties without bird escapes. The door to the actual aviary needs to enable easy access to clean, replace perches, move in large carry boxes to release birds and, in the case of a conventional aviary, allow entry of a wheelbarrow to make rubbish removal and cleaning more efficient. Access to feed and watering stations from a walkway is also beneficial. Water and food bowls are best secured to prevent them from being flipped over. Large, heavy ceramic bowls that are easy to clean are readily available via bird clubs and suppliers.

Security

Security is important and cameras can serve dual purposes. Installation of cameras on the nest box, looking into the aviary, can provide great insights into the secret lives of these birds. There are a range of manufacturers and cameras to choose from, with many having apps that allow remote dial-in and control of cameras.

Secure locks on the doors, preventing the birds from getting out, are as important as keeping intruders from getting in. The addition of an alarm system is worth considering to protect your investment.

Large walkways are essential in breeding parrot complexes

NOISE

The noise level of large macaws should not be underestimated. Bird-lovers may consider their bird/s to be quiet, meanwhile the neighbours are pulling their hair out. It is best to do your research before purchasing a bird or pair of birds. For the most part, calling occurs in the morning and afternoon, with the odd call throughout the day. This is often an alarm call when the birds are spooked or see a bird of prey flying overhead. It is safe to say that sometimes it is best to live on acreage unless you have neighbours that like the birds or are forgiving of their noise.

Conventional aviaries suitable for housing macaws and cockatoos

This Hyacinth Macaw shows strength in bending his food dish

Offering a wide range of food types like this in captivity reflects the wild macaws' varying diet

Military Macaws sit outside their nest entrance and (right) inside the nest

BROWSE

Like Yellow-tailed Black Cockatoos, the large macaws can turn perches and branches into woodchips in no time. It's great for garden mulch but little else! Fortunately, in Australia, we have access to a wide range of *Eucalypts* and other species that can keep the birds active and using their beaks for good, rather than getting into mischief chewing wire, screws and rivets. Regular supply of browse is beneficial for these birds and can add to the aesthetics of the aviary. Many species of tree can be grown around the aviary, serving a dual purpose of landscaping and giving the birds browse.

FEEDING

The large macaws come from a vast number of habitats, and diet varies, with some species eating a large number of palm fruits and others feeding from a variety of rainforest trees etc. It is impossible to replicate this for them in captivity, but we can provide a great range of seasonal foods. As aviculturists we breed birds for the next generation and for pet owners, so a good diet is key to success and ensuring good health in the progeny produced.

A nutritious diet will aid in preventing metabolic bone disease and assist in getting positive breeding results, with chicks on the perch. The supply of fruits and vegetables, soaked or sprouted seed and a pelletised diet and seed mix will assist.

Chilli, capsicum, carrot, celery, peas, beans and beetroot are appreciated, and the list goes on.

Some large macaws in the wild eat high-fat diets. It must be remembered, however, that they fly vast distances compared to captive birds. Be aware of the fat content of various nuts and amounts provided to avoid obesity. Nuts in shell such as almond, pecan, Brazil, walnut and macadamia are popular, however, some species cannot open all in-shell nuts.

Food can be provided in many ways for increased interest. Pumpkins that have been hollowed out and stuffed with food can be provided for the birds to rip apart and feed on. Capsicums can be stuffed with other foods and the lid put back on. Nuts can be hidden around the aviary...the opportunity to experiment is endless. If in doubt about diet, consult an avian vet.

BREEDING

The difficulty of breeding each species varies. Sexual maturity also differs between species. Blue and Gold Macaws appear to be the easiest species of large macaw to breed and may do so as early as three years of age. Providing the birds have been allowed to bond from an early age, you are off to a good start.

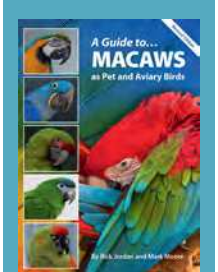
Maintaining the birds on a quality diet and increasing quantities fed during breeding can assist in spurring pairs on. A range of nest box designs, or a large wine barrel positioned in the walkway, are often used with large macaws. Reinforcing the edges of the entrance with flashing may slow down the destructive nature of these birds. Pairs may rush into the nest box during inspections, so some breeders design a nest box with a partition inside that prevents the parents getting in while inspections are taking place.

Hardwood shavings along with chew blocks in the nest box at the laying site will provide the female with an area to work before laying her eggs. Both male and female may retreat to the box together throughout the year, as many breeders keep the nest in year-round. While some pairs remain defensive throughout the year, others become more vocal and territorial as the season approaches.

It has been found that in some areas, breeding of the more common species is occurring at various times of the year. During breeding time, it is best for the keeper to 'remain scarce' to prevent stress levels in the birds and allow them to focus on rearing chicks. In recent years it has been good to see many breeders allowing their birds to parent-rear.

MUTATIONS

There are a number of mutations currently being worked on in Australia, although these appear to all be in the Blue and Gold Macaw, with the exception of a Lutino Buffon's Macaw that hatched recently. In time we will likely see mutations of other macaw species popping up. There are many examples of macaws with white toes and toenails, for example and, while so far it appears this has not led to anything, perhaps we will see Pied mutations soon.



Published by ABK. This title is out of print currently, however if you contact us on email birdkeeper@birdkeeper.com.au or phone 07 55680011 we can place you on back order for a small print run.

Lutino Blue and Gold Macaw

Opaline Blue and Gold Macaw bred by Tod Osborne

Blue and Gold Macaws in Normal (left) and Blue Opaline bred at Bird International Inc
PHOTO BIRDS INTERNATIONAL INC

Note the pied feather on the Blue and Gold Macaw

CONCLUSION

While large macaws such as the Blue and Gold, Green-winged and Scarlet Macaw are more readily available as pet and aviary birds, the same cannot be said for the Hyacinth, Military, Buffon's, Blue-throated and Red-fronted Macaws. Although in the hands of a number of breeders, it will be some time before these species are available to the public in greater numbers.

The large macaws are a varied group of birds with similar levels of care required. Though not beginner species, they are a rewarding group, well suited to those with the level of experience and dedication required to keep and breed them.

PET BIRDS

The decision to keep a macaw as a pet is not one to take lightly. They are not only long-lived but destructive, noisy and demanding. Temperament varies between species, as well as between individuals of each species.

Price and rarity are additional considerations when choosing a large macaw, with the number of Hyacinth Macaws available to the pet market, for instance, very low and therefore expensive.

The suitability of any large macaw as a pet bird is greatly reduced for those living in units or suburban areas with neighbours in close proximity. Cage size and quality must also be considered. While there are many cages advertised cheaply online, it is important to purchase a quality cage that gives the birds room to move, stretch their wings and allow them to play with their toys.

Out-of-cage time is also a must and having an aviary out the back for the bird to go into during the day is a bonus. Supervision of birds when out of the cage is recommended as they can turn furniture into splinters quickly.

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AUTHOR & PHOTOS
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A PASSION FOR

Glossy Black COCKATOOS

Glossy Black Cockatoo male

THE Glossy Black Cockatoo *Calyptorhynchus lathami* is my favourite parrot species and kindles the flame of my passion for avian conservation. I've been obsessed with learning everything there is to know about this species and beyond for the last 10 years, and believe I've made some incredible progress.

There are three subspecies of the Glossy Black—the nominate *C. l. lathami* from central Queensland to Victoria, the northern subspecies *C. l. erebus*, and the South Australian Kangaroo Island subspecies *C. l. halmaturinus*. I've been lucky enough to see all three in the wild and document them feeding on a variety of *Allocasuarina* and *Casuarina* species. However, my local population of *C. l. lathami* is of particular interest to me, being only 27km from my home in Cowra, NSW.

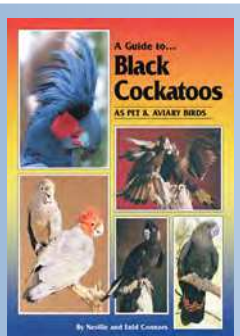
This population feeds predominantly on the She-oak *Allocasuarina diminuta* (Broom-brush), a particularly small species, especially in the poor soils it grows in locally, with most plants reaching about 3–4m in height before falling/bending over. The breeding ecology of the local Glossy Black Cockatoo is very poorly understood, so I've made it my mission to learn everything I can. I have studied various breeding events but this year is the most successful by far, with nine active nest sites found in the last few months.

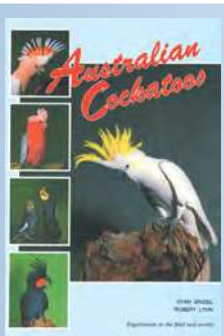
Informative Books

A Guide to... Black Cockatoos
By Neville & Enid Connors

Australian Cockatoos
By Stan Sindel and Robert Lynn

Available from ABK at www.birdkeeper.com.au or see Free Mail Order Card





BREEDING

Glossies often breed biennially, producing just one chick every two years. This is subject to variables, of course, with failed nest attempts often resulting in a pair breeding in consecutive years. However, if successful, chicks take around 12–14 months to become fully independent, hence breeding only every two years. The egg is generally laid between April and July, but most often in May, and the female incubates for 30 days.

I am monitoring some chicks that are very late this season, about 14 days old (at the time of writing), while most others being monitored are 45-plus days of age. This is concerning as the chicks are not very heat-tolerant, and dehydrate quickly when exposed to temperatures above 30°C, especially when more than 25–30 days of age. This is due to a thick down which helps insulate chicks when alone during the cold winter months.

Adding to the dehydration risk is the fact that water in the crop is absorbed quickly to assist in the digestion of their highly fibrous diet. Glossy chicks have an incredibly slow digestion compared to other black cockatoo species, with a full crop lasting 8–12 hours. This means chicks only need large feeds 2–3 times a day. I've monitored this occurring with male birds returning to the nest at dusk and dawn.

The chick is left unattended in the nest at about 20 days old, so the female can join the male in sourcing food for the growing chick. The male feeds the female, which then returns to the nest to feed the chick. Although the male will feed their chick directly once it has left the nest, I have not yet seen one enter the nest hollow to feed the chick, at most leaning into the hollow to feed the incubating/brooding female. More often the female will leave the nest to be fed even while incubating. The Glossy's slow digestion allows it to maximise nutritional intake from the *Allocasuarina/Casuarina* seed/fruit which contains massive amounts of protein and fat—it's basically a superfood!

Glossy Black Cockatoos relish She-oak pods

GROWING UP AND THREATS

Chicks leave the nest at around 90 days of age (120 days in the nest including incubation), which is the longest nesting period of any cockatoo species. Ever-hungry, they are very easy to locate at this time due to their loud and persistent begging. In the nest, chicks are at risk of predation from brush-tailed possums and potentially reptiles like pythons and Lace Monitors (although I don't believe this has been documented). With most reptiles in a state of brumation in winter, and even the possums less active, spring poses a much bigger threat, especially when the trees they nest in are in blossom. I've only monitored a couple of nests thought to have lost chicks due to possum predation. One chick has vanished this year with no obvious trace of predation, but it remains the most likely scenario.

The female sleeps at the hollow entrance, or just inside the hollow, at night when chicks are old enough to regulate their own body temperature. The male often sleeps nearby in hollows or in groups in larger trees. Most nest hollows occur at about 6–8m from the ground. I've seen groups of mature and young males roosting in 10-15m high Black cypress pines of a night.

Most of the local nesting tree species are of Red Gum, but I have seen a couple of nests in Mugga Ironbark, one of which failed due to the limb collapsing during a storm. Glossies will nest in deceased trees that possess ideal hollows but prefer live tree nest sites.

SEXUAL MATURITY

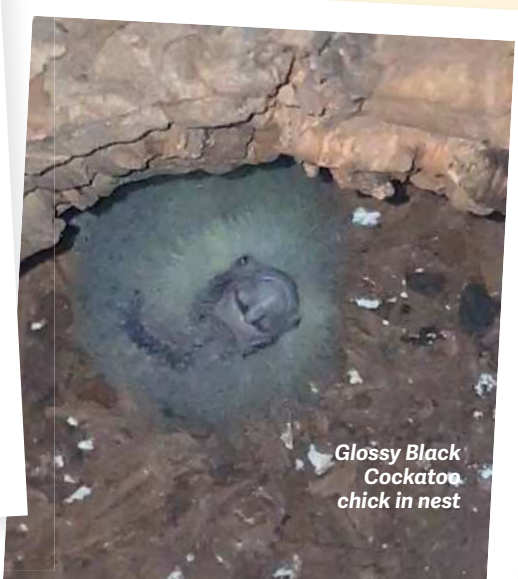
Once young Glossy Black Cockatoos have become independent, they quickly join up with small flocks of other Glossies. These groups often consist mostly of bachelor males of varying age. Females that join are quickly paired up and separate from the group well before they are sexually mature. Males commence feeding the female immediately when bonding, and their loud displays can be heard throughout the forests from late February to late August, although some males will display throughout the year.

Females have been known to become sexually mature in captivity as young as two years old, but in the wild most begin to produce eggs at around the three-year mark. Males become sexually mature around 3–5 years of age but start to practice their epigamic display at 18–24 months. While some males may become sexually mature earlier, successful pairing rarely occurs before 3–5 years due to competition from more mature, experienced males. The sex ratio in populations that I've studied leans heavily towards males being more abundant.

CONCLUSION

This season has been relatively successful for Glossy breeding, with drought and fire-affected areas now recovering after two years of wet weather. The Glossy Black Cockatoo and many other species suffered immense population and habitat loss as a result of the catastrophic bushfires but it's not too late to assist this species and their ecosystems in recovery. We owe it to ourselves and future generations to continue studying and conserving our unique Australian wildlife.

Glossy Black Cockatoo female at the nest



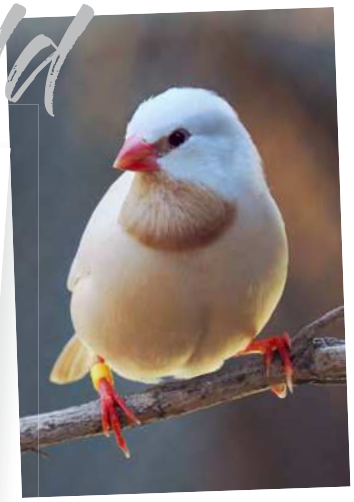
Glossy Black Cockatoo chick in nest

THE GREAT PLANS OF FINCH BREEDER, Tony Arnold

AUTHOR & PHOTOS
PETER ODEKERKEN

Male Star Finch stretching in display, having just fed some offspring

Male Melba Finch—Tony has reproduced this species in large numbers with genetic diversity



The sex-linked mutation Cream Black-throated Finch bred without the use of foster parents

WAS fortunate in June to visit a very capable bird breeder named Tony Arnold in Townsville. When Tony was four years old, his mother came home with some Budgies she had won at a raffle. This was the lucky start to Tony keeping birds. As he progressed with his hobby, he acquired a number of other species like homing pigeons, finches and quail over the years.

Tony's interest blossomed into his teens, with more finches and a few parrots. He started to focus more on these, with a few pheasants, Purple-crowned Lorikeets and Bleeding-heart Pigeons thrown in for good measure. He did have a five-year spell away from bird keeping but he couldn't stay away from finches.

AN ENVIABLY WELL-PLANNED SET-UP

For the last 2.5 years Tony has been busy constructing a great set-up at Townsville. I have seen many avicultural collections around the world and still enjoyed seeing his North Queensland property because the aviaries are built with such a lot of thought. He came up with a plan of what he wanted to construct but, as he admits, could not have done it without his dad and some local friends.

I must say that, while I have obviously considered the needs of the species in their roomy aviaries, I have often built a complex without as much thought as I should have had in terms of making maintenance easy on myself. For example, I don't have a simple way of cleaning water bowls, so it is time-intensive. Instead of water being provided to each aviary, I have access to water in the walkway and the inconvenience of having to use a hose to go to each aviary individually. Of course, such conveniences all cost money and time, but it is well worth considering how to reduce your long-term workload and make the necessary maintenance less of a chore.

In seeing Tony's set-up, I was impressed with just how much thought he has put into how he keeps his birds. For example, a typical arrangement for me in keeping pests out of aviaries is 90cm wide Colorbond™ sheeting at the base of my conventional aviaries. What rodent can scale up a flat smooth surface?

Well, they certainly can, usually at a joint between sheets, or at a right-angle corner. I once witnessed a mouse investigating a 25mm square galvanised tube, four of which supported the corners of a suspended aviary off the ground by 90cm. To my surprise the mouse gained purchase and started to climb up this tube and got to about 20cm above ground, before losing its hold and falling back down. I laughed and thought to myself, 'ha ha, sucker'. But the mouse must have heard me and on the third attempt got all the way to the bottom of the aviary wire—I'm sure it looked over at me with a grin!

Tony is one of those guys that you admire (but secretly hate) because he puts so much thought (which you wish you had!) into his aviaries, bird room, travelling boxes and his bushfly-breeding cabinets. I not only enjoyed his birds but got a lot of ideas by just seeing his set-up.

Tony used a bobcat to trench the rat walls to a minimum of 90cm deep and placed concrete in the trenches. So far he has not had a rodent problem. His large, planted aviaries would be a very happy home for rodents, but these walls and the above-ground sheeting have controlled them entry. As I said, rodents can climb up just about anything, so to combat this Tony has surrounded his aviaries with aluminium channel which prevents them climbing onto the aviary wire.

His walkways are generous in width, so you don't need to squeeze along between the aviaries. They are also part of the overall

One of the large flight aviaries—note the aluminium channel at the top of the sheet and the concrete footing preventing rodents entering

Tony's well-designed fly box for easy breeding of maggots

A lovely male Red-faced Parrot Finch investigating a termite mound for a treat

A male Cuban Finch vigorously courting a nearby female

The Tri-coloured Parrot Finch is a beautiful addition to any mixed vcollection

shelter and feeding areas, which means Tony can service his birds during rain periods without getting wet and having to rush about madly, possibly disturbing his birds.

Tony keeps both Australian and foreign finches. He purchased two pairs of Melba Finches for genetic diversity and has bred over 100 young. He also has a soft spot for one of my favourite finches, the Black-throated Finch, of which he has the Normal, and the sex-linked Fawn and Cream mutations. He has now managed to breed from his Creams without using foster Bengalese Finches.

Like me, Tony feels it is important to breed from his pairs without resorting to foster parents. Often young that have been fostered by Bengalese are difficult to breed, so he feels fostering is detrimental to building a breeding colony. Tony is now breeding from Cream Black-throats that are parent-rearing and he wants to build up to a sustainable flock of this mutation.

DIET

Tony feeds his birds every morning with sprouted seed, to which he adds and thoroughly mixes through Breeders Plus (a mineral energy product with an oily texture), Naturally for Birds Protein Boost and Passwell's Finch Soft Food. Live food, such as termites and maggots, is supplied with moths from his moth traps, and mealworms as required. Green seed heads are much appreciated when available, as well as quality grit and cuttlefish bone.

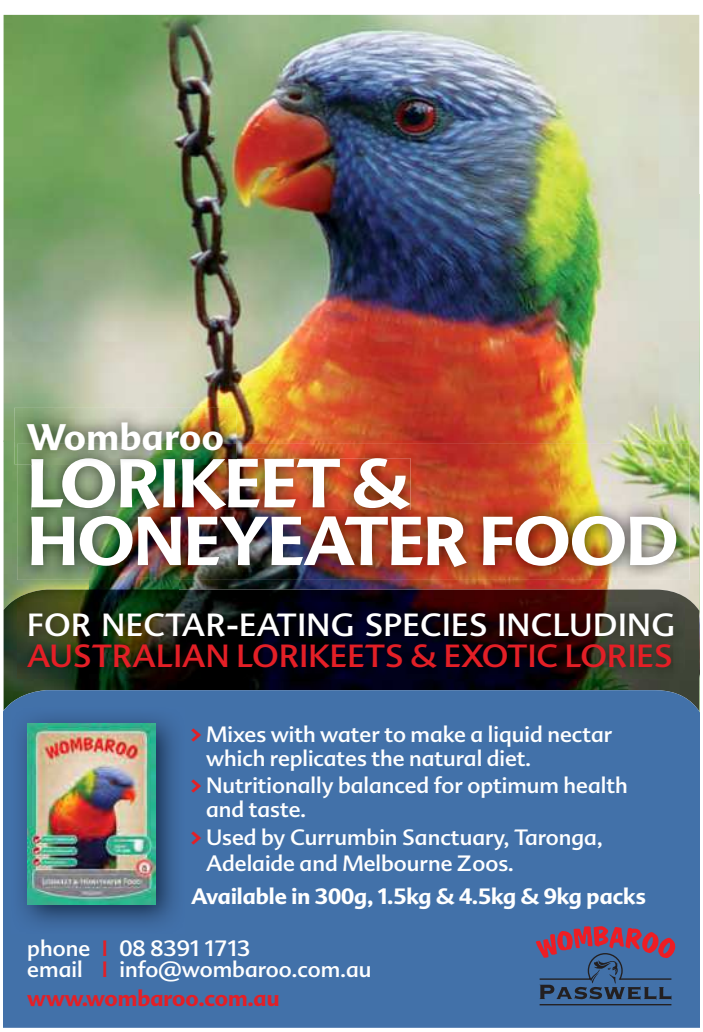
A quality dry seed is available at all times, and is again mixed with Breeders Plus, diatomaceous earth, BVM Probiotic powder and a little chilli powder. Fresh water for drinking and bathing is a must, and in a hot Townsville summer can be changed 2–3 times a day.

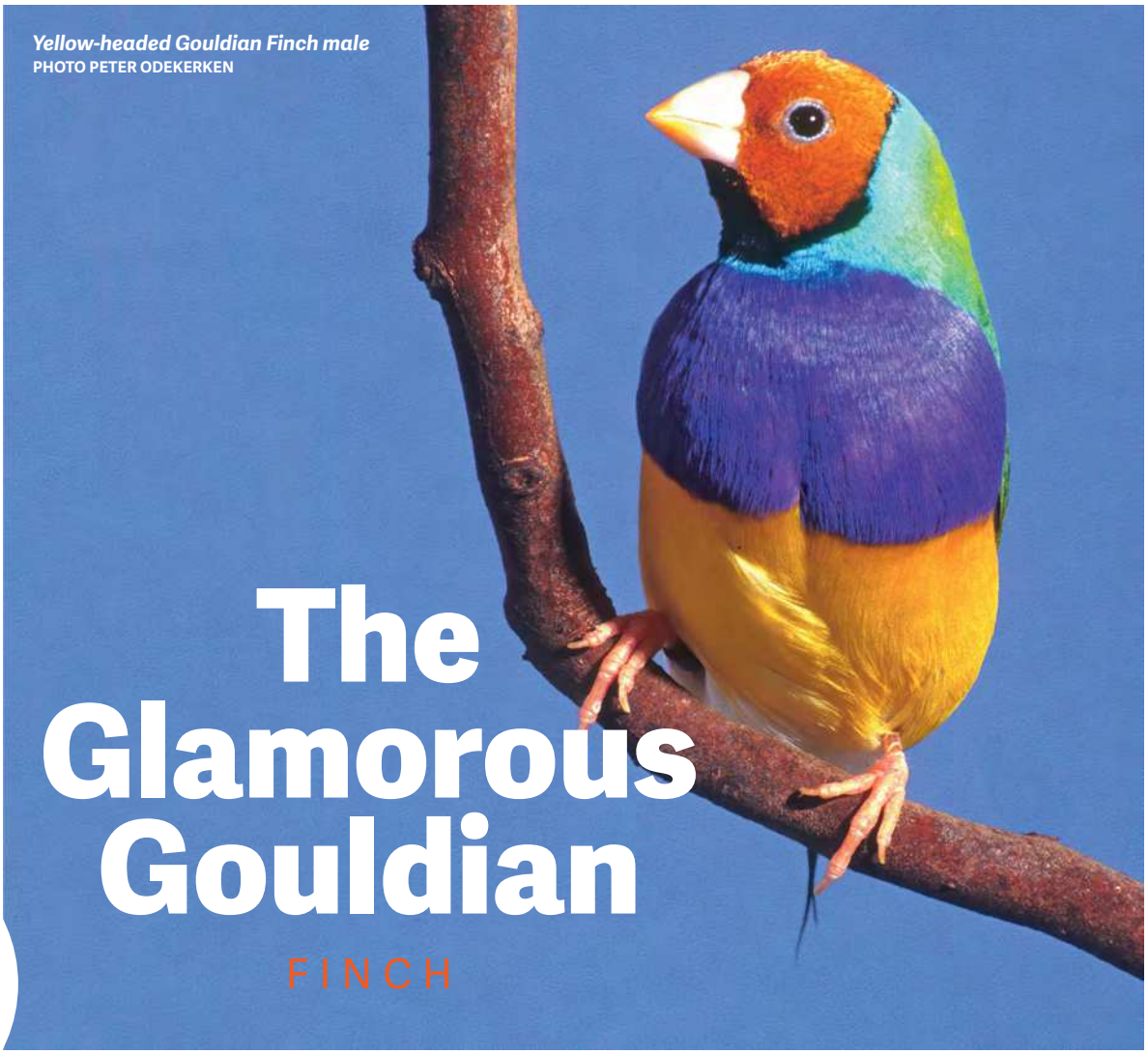
Tony has built a sophisticated bush fly cabinet which is very practical and easy to use. Again, he puts a lot of thought into how he feels birds should be kept, fed, and any accessories like carry boxes and fly cabinets.

It was an eye-opening visit and we had a great time discussing birds and Tony's set-up, as well as me having the opportunity to photograph quality birds in large aviaries.

This large bird room has three holding aviaries, cabinets, work bench for preparing food, fridge, dishwasher and a sink with separate bench to prepare the maggot mix. There is a separate room for storage, which is also where Tony breeds his maggots and mealworms

The wide walkway allows free movement for maintenance, wide doors for access and, although difficult to detect in an image, an aviary-width door above the entrance to let any escapees re-enter without the need to resort to the stress of using a net



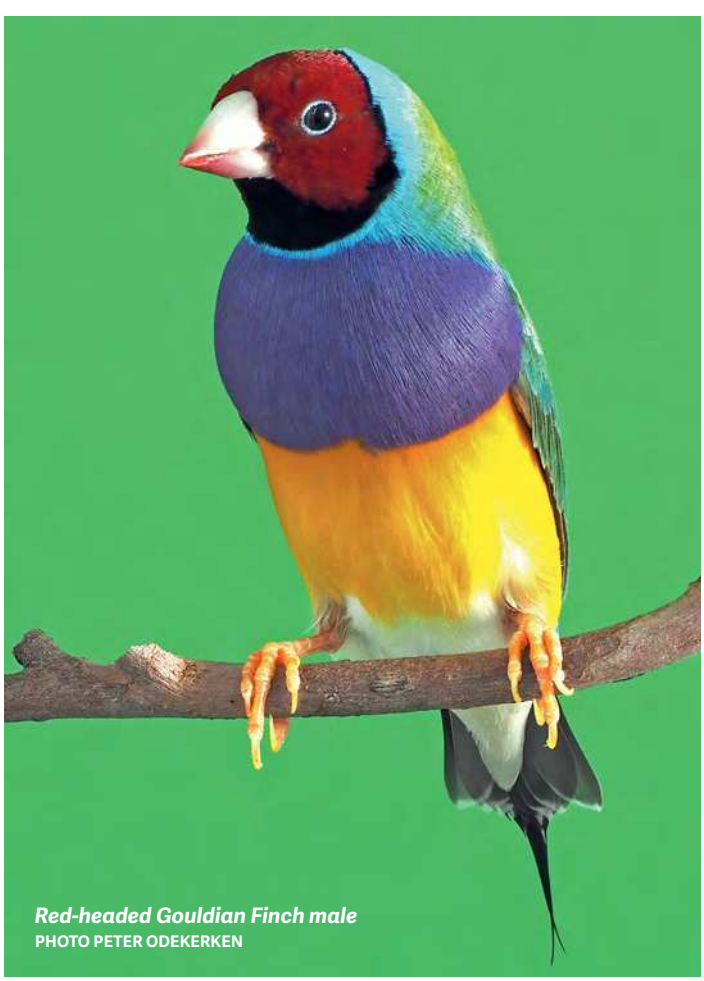


Yellow-headed Gouldian Finch male
PHOTO PETER ODEKERKEN

The Glamorous Gouldian

FINCH

AUTHOR
DAVID PACE



Red-headed Gouldian Finch male
PHOTO PETER ODEKERKEN

HEAD COLOURING

Red-headedness is the dominant gene in wild Gouldian Finches, so all Gouldian males exhibit colour on the tips of their beaks, usually red, indicating they are carrying the dominant gene for red-headedness, even though they may appear black-headed. On rarer occasions, they may exhibit yellow-tipped bills, indicating the gene for yellow-headedness, which is recessive. All these birds are pure—'wild type'—although, technically, they are forms (naturally developed mutations) living and surviving alongside each other. When we talk about avicultural mutations, we are generally referring to selective breeding of colours ie White-breasted, Yellow or Blue (in which the green is replaced by yellow or blue) or pure white birds.

In recent years, the Gouldian Finch has become one of the most recognised Australian birds throughout the world. Its popularity as an aviary bird has surged. It breeds freely in captivity and, together with its beautiful plumage and the proliferation of many mutations, has become entrenched as an avicultural favourite to such an extent that many beginning their aviculture journey are starting with this species.

HOW THINGS HAVE CHANGED!

Flashback to the 1970s when I was a teenager—like many others, my avicultural journey began with a pair of Zebra Finches my father purchased for me. I was aware of Gouldians, but everything I read suggested they were certainly not for the beginner; likely to simply 'drop dead' for no apparent reason. The thought of keeping them alive, let alone breeding them seemed like a distant dream.

I did eventually acquire a pair a few years later. These were immature, legally trapped wild birds. They were liberated into my cold, south-facing, damp, Melbourne aviary, and.... you guessed it, they were dead within two days. I convinced myself the literature was correct and that Gouldians were liable to drop from the perch. I vowed not to keep them—which I suspect saved the lives of many Gouldians!

It was during the 1990s that, with a great deal more experience, I again acquired Gouldians and housed them this time in dry, draught-proof, north-facing aviaries. Not surprisingly, they thrived and bred freely.

Black-headed Gouldian Finch male
PHOTO PETER ODEKERKEN

Male Black-headed Gouldian Finch—note the red tip to his beak, indicating he carries genes for red-headedness
PHOTO DAVID PACE

COLONY VERSUS SINGLE PAIRS

In those early days I colony-bred the Gouldians, housing several pairs in each aviary. Generally the breeding results were good. However, there were times when newborn chicks would be thrown from the nest, or clutches of chicks would be dead around the eight-day mark when parents stopped brooding at night. At the time I was at a loss as to why chicks would be expelled from their nest. Then Glenn McCarthy, a well-known finch breeder, related his own experiences.

'I recently noticed an interesting event in my aviary. I was sitting watching the birds and an old Black-headed hen Gouldian Finch was checking out nest boxes. She was at the entrance to a box which I knew had young in it. I was astounded to observe her pulling chicks from the nest box and one by one, throw them onto the ground!

'The chicks were about five days old. I immediately entered the aviary and picked them up and replaced them into the nest box. One was bleeding on its wing tip where she had been pulling at it. The mother, another Black-headed hen, obviously agitated, flew into her box to check on her chicks.

'The next morning the chicks looked fine. I have not seen this before, but have at times had young thrown out of their boxes. I have until now always thought it was the parents' doing!'

Glenn's observation provided food for thought. During this period, I had had *Emblema* chicks thrown from the nest by an extra male, so I began pondering the idea that in an endeavour to gain a genetic advantage over others of the same species, odd individuals would dislodge their neighbours' chicks. I had also collected many dead Gouldian hatchlings from the aviary floor. Since then I have always housed Gouldians as single pairs with other finch species. I would have to say that as a result I can't recall a single occasion when I have collected a dead Gouldian hatchling from the floor.

AVIARY DESIGN

My Gouldians are housed in open, north-facing aviaries. The aviaries are 4m long x 2.5m wide. The rear 2m is sheltered, being fully insulated in the ceiling and internal walls. The front 2m and ceiling are open to the elements. Here in Adelaide, and also when I lived in southern Victoria, I have found Gouldians are fine in open aviaries, providing the shelter is very cosy and draught-proof.

My aviaries are planted, hence the open wire ceilings. I place as much emphasis on the vegetation and creation of habitat as I do on the bird species, hence recognising the need for plants to obtain rain and light. Incidentally, Adelaide Zoo also has a thriving Gouldian Finch aviary that is two-thirds fully open, with a cosy shelter to the rear. Their colony is very successful, as are the habitat plants that co-exist with them.

Obviously, Gouldians would thrive in a fully covered aviary and even a cabinet. Many do breed their birds in cabinets with great success. The only concern is that cabinet-bred individuals will potentially have greater challenges adjusting to an open flight. When purchasing Gouldians, aviculturists should be aware of how they were previously housed and bred, to ensure the birds will be able to adjust to their particular setting.

FEEDING

Gouldians are straightforward feeders. Generally, they thrive on dry seed, soaked or sprouted seed, green feed and grits. I feed three dry seeds—red panicum, white millet and plain canary seed. These form the mix that I sprout and feed with a sprinkle of vitamin supplement. The Gouldians consume cuttlebone, and adore freshly microwaved eggshell. Greens would be their number one food preference. I tend to provide chopped silverbeet or bok choy, and seeding grasses and milk thistle when available. They also receive a slice a Lebanese cucumber daily in their sprouted seed mix.

In my opinion, the Gouldian is the messiest feeder of all Australian grassfinches. As their numbers grow during the breeding season, so does the discarded and spilt seed in the feed trays. When Gouldians are held in cabinets for short periods, I am astounded at the amount of seed thrown about the cabinet and surrounding area. I'm not sure if others have experienced this, but it is seems to be a quirky character trait.

Black-headed Gouldian Finch female in the rain—Gouldian Finches love to bathe

SLOW MOULT TO ADULTHOOD

Young can be left with the parents, however, I remove the chicks after six weeks, as by this time another clutch is imminent. Young birds are moved into a holding aviary as a flock and here they remain until they colour up, which takes until December for most chicks bred that year. Clutches that fledge after August tend to do a half moult and may not attain full plumage until December the following year!

The slow moult of Gouldians from juvenile to adult plumage is, in my opinion, their one big drawback. It basically means that all young bred in a particular year must be held in holding aviaries for up to nine months before they can be moved on. It is a generally held belief that uncoloured Gouldians should not be traded as they are prone to stress (although I am yet to see any studies or science to prove or disprove this theory). Holding onto birds for several months takes up a great deal of resources in terms of space and feed when compared to a Red-browed Finch that attains full colour in four weeks, Emblemas that are fully coloured at six weeks and Diamond Firetails that take 10 weeks.

BREEDING

Breeding starts anytime from January and carries on throughout autumn, winter and even into spring. Clutches appear in all months from February through to November. Five to seven white eggs are laid and incubated for approximately 14 days. Both sexes share the incubation, with the male spending a large portion of the day sitting, while the female does the nights.

Gouldians are a hardy species, having no issues with clutches appearing in the Australian winter months of June and July, and looking immaculate in feather. Newly fledged chicks have distinct fluoro nodules around their beak, designed to highlight to their parents their position in a dark hollow.

In the wild they nest in hollows. In captivity, Gouldians will use a nest box, the design of which is not too important. I have been amused over the years at the high-tech nest box designs, with entry foyers and all manner of gadgets. Mine nest in these high-tech boxes, but also in very basic boxes with small or large entry holes. In fact, on many occasions they nest in the brush, refurbishing another finch species' nest. This does make it hard to control how many clutches they produce, because even if I remove all boxes, they likely find a brush nest. Basically, Gouldians are 'the new Zebra Finch'—they will nest anywhere!

REVIEWING THE 2022 SEASON

The following table highlights the number of clutches and chicks produced by three pairs during the 2022 season. It also highlights clutch frequency and the months in which chicks fledged. It is worth noting that this year was unseasonably wet in Adelaide.

CHICKS BORN 2022 SEASON

	JAN-FEB	MAR-APRIL	MAY-JUNE	JULY-AUG	COMMENTS
PAIR A	5	6	6 & 2	4	TOTAL OF 23 CHICKS FROM 5 CLUTCHES
PAIR B			3		TOTAL OF 3 CHICKS FROM A SINGLE CLUTCH
PAIR C	5	7	4 & 4	4	TOTAL OF 24 CHICKS FROM 5 CLUTCHES

GENERAL COMMENTS

- *Pair A (Black-headed) oddly fed feverishly on live food in the form of maggots. In all the decades I have bred Gouldians, this was the only pair to consume live food.*
- *Interestingly both Pairs A and C (Black-headed) had two clutches in close succession towards the end of the season in August.*
- *Pair B (Red-headed) just never seemed 'right'. The female came into breeding condition with the darkening of her beak early on, but this 'pair' seemed incompatible. They did surprise me when they fledged three chicks in July, late in the season. After this, the adult male seemed to develop health issues and was compromised, indicating other underlying causes for this pair's performance.*
- *At the time of writing (August 2022), both pairs A and C are feeding their current clutches. It is possible these pairs could produce a further clutch or two—time will tell.*

This female Gouldian and her mate produced 23 chicks this season. Those pictured fledged in August and are two of four

COMPATIBILITY

Gouldians are a peaceful species and ideally suited to a mixed collection. I only keep wild-type normal Gouldians. These are housed with fairy-wrens, Diamond Firetails, Pictorellas, Painted and Crimson Finches. As mentioned earlier, only a single pair of Gouldians is held in each aviary. The Gouldian's niche within such a mixed collection works well as they generally do not eat live food, so will not impact on its availability for other species. Furthermore, as they generally utilise nest boxes, there is little competition from other species which prefer building their own nests in brush. The only exception is the Crimson Finch, which I find is also quite at home nesting in both boxes and brush.

AUSTRALIA'S MOST COMMONLY KEPT FINCH

The recently released 2020 National Finch and Softbill census results clearly demonstrates that from 587 respondents to an anonymous survey of finch keepers, the Gouldian Finch was by far the most kept Australian finch species, with 401 respondents holding 7,843 birds—a testament to the hardiness, free breeding and attractiveness of this delightful finch.

The Zebra Finch was next with 158 respondents holding 5,580 birds. (Fitt G, *Finches 2022 White Papers*, Queensland Finch Society Inc)

CONCLUSION

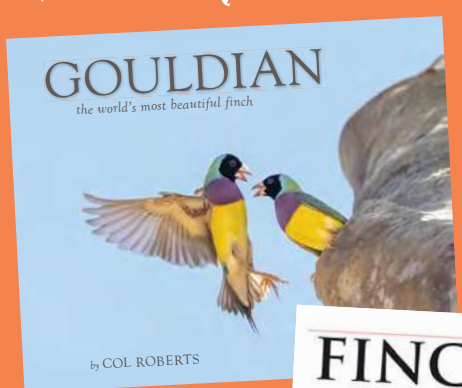
Gouldian Finches are hardy, free-breeding and peaceful aviary subjects. They are easy to cater for and do not require live food. It really is not surprising that they have become such a popular aviary bird worldwide.

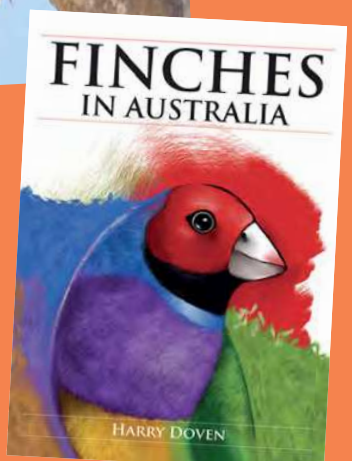
There is little doubt that the Gouldian of today is a great deal hardier than the Gouldian of the past. However, we also understand the needs of this species more than ever before, helping secure their stature within aviculture.

The main drawback, as stated, is the fact that young need to be held for at least nine months rather than the 4–10 weeks of other species, potentially creating a strain on holding facilities and finances in supplying feed. This challenge becomes further pronounced as the market is flooded with Gouldians when they do colour up at the same time of year, driving their value downwards.

There is no question that the Gouldian is a wonderful ambassador for aviculture, in particular finch keeping. We are indeed fortunate to have such an amazing variety of Australian grassfinches, with the beautiful Gouldian Finch being the glamourous celebrity symbol of aviculture worldwide.

Finch Books





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KEEPING FAITH IN

Troubled Baby Parrots

NOT all handfed baby psittacines become social at the same rate. Accordingly, not all handfed fledglings are ready to be moved to a new owner and home in the same time frame.

Faith was a nine-month-old Yellow-fronted Amazon baby that left her birthplace here in Hawaii and went to a new home. She was born in early May, the younger of two chicks by *Tia* and *Yoga*, our third generation Yellow-fronted pair. She spent five weeks in the nest box getting to know her parents and their mannerisms. She was then taken, along with her brother and several cousins from other pairs, for handfeeding, fledging and weaning in the world of humans.

Yellow-fronted Amazon juvenile
PHOTO JADE WELCH

AUTHOR & PHOTOS
EB CRAVENS

WHY SO TIMID?

However, from the beginning, *Faith* was different. She hung back in the dark of her nursery basket at feeding time, trying her best to avoid human hands, the syringe, daylight and anything else new and strange to her. She and her brother were nearly inseparable. Long past the time he was seeking out humans for treats and frolicsome play, she would avoid stepping up if possible and fly off if moved while perched or sitting on a food bowl, and bolt nervously when strangers came to the door. Even colourful clothing would set her off on a whirl around the room in timid flight. Something had gone wrong—*Faith* was a troubled psittacine chick.

Poicephalus species, such as this Red-fronted Parrot, can be highly sensitive during the handfeeding stage

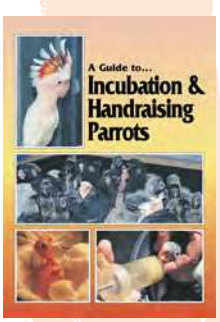
Now, this is not particularly unusual in the world of captive-raised baby parrots. Baby Hawk-heads, Derbyan Parrots, Green-naped Lorikeets, Meyer's Parrots and Military Macaws are just a few of the more sensitive species that can develop suspicious and fearful behaviour if hurried down the path to 'socialisation' too early. However, with a Yellow-fronted Amazon fledgling brought up in our own aviaries, it was quite unique.

My assessment was that the day of pulling from the nest box was much more traumatic for *Faith* than for the typical five-week-old chick. Perhaps she had a greater bond, hence greater need for her mother setting on top of her some hours each day. Maybe something had happened early on in the nest box—say, an aggressive older brother or an irritating joint sprain—to start the cycle off, and we humans had exacerbated the situation by taking away all semblance of stable security at an untimely moment. Whatever it was, it did not seem to get much better.

Her brothers and cousins left for new homes or to move outside with our adult Yellow-fronted Amazon flock, and *Faith* was left with one companion Yellow-fronted—a two-year-old female named *Maya* that is a special needs parrot and lives in our house.

Even play days outside near the other parrots in the colony cage or baby gazebo did not seem to calm *Faith*. Our one nurturing link to her was the handfeeding formula, and once she had weaned from that, the weaning foods of warm, soaked pellets, wholegrain bread or monkey chow offered at sunset each day.

AGT Handrearing & Incubation



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THE SEARCH FOR CONFIDENCE

It was obvious that *Faith* could not move on to a new owner until her personality became secure and confident. We kept working with her, observing, trying to expand her life and waiting, always knowing that she might have to live here at The Perfect Parrot forever. Sending such troubled pets to other homes can be an invitation to disaster...

Things went along like this for some weeks, until we were called upon to go abroad for a speaking engagement in August. During that time *Faith* and *Maya* were watched over by a house-sitter. *Faith* never liked Bruce because he was a stranger, but at least she learned to tolerate him and take her warm food, now in a saucer, from someone new. Upon our return, we began putting her and *Maya* out every few days in the walk-in gazebo with a five-year-old Yellow-fronted male that had not yet found a mate.

Lorenzo liked both girls, and ended up taking them one step further in their development/play as savvy hookbills. He sometimes played rough, and *Faith* learned to stand up for herself with this larger, older Yellow-fronted. Then *Lorenzo* chose a different female as a companion, and we were back to square one with *Faith*—in the house among humans.

However, something had changed. She was flying better and making wild flock noises that she had never uttered before. She began to sing like some of our former pets and shout '*alohaaa*' in that high-pitched operatic voice so loved by Amazons of all sizes and shapes. Her tolerance for strange things and sudden movement improved. And, believe it or not, after time outdoors in flights where there are wild birds, hawks, feral cats and mongoose to be occasionally seen, *Faith* actually became calmer and wiser in her ways.

PATIENCE PAYS OFF

I really can't remember if it started with burritos, corn chips, pasta, or maybe a small treat of her all-time favourite, cheddar cheese, but *Faith* certainly came to recognise what a human plate was, and when we were eating! This quickly progressed to noting the refrigerator door opening or the cupboard with nuts opening, or a glass containing fruit juice, or whatever...

You could not keep her from flying to the person doing the eating. Yes, she still maintained her quirks, like avoiding all forks and spoons and preferring to independently dig right in herself, but even strangers and guests who held snacks found themselves accosted with a flight to the shoulder, a beg and a grab for a morsel. Wow, I smiled. This is progress!

April and I like to sleep out on the enclosed lanai (porch) where our pets also perch at nighttime. It follows that when the birds wake early and we are sleeping in a bit, they sometimes fly down to the bed covers and want to snuggle and play. We keep an open basket of toys near the bed for just such weekend opportunities.

Faith's confidence gained from coming to humans for treats soon blossomed into a desire to fly down to the bed with some other fledglings and play with the toys. Once in that situation, it was only a short while before we could tickle her feet and pet her head and roll her over and growl/wrestle/play in clutch-mate Yellow-fronted Amazon fashion. At 28 weeks old, *Faith* was well on her way to becoming a captivating companion psittacine.

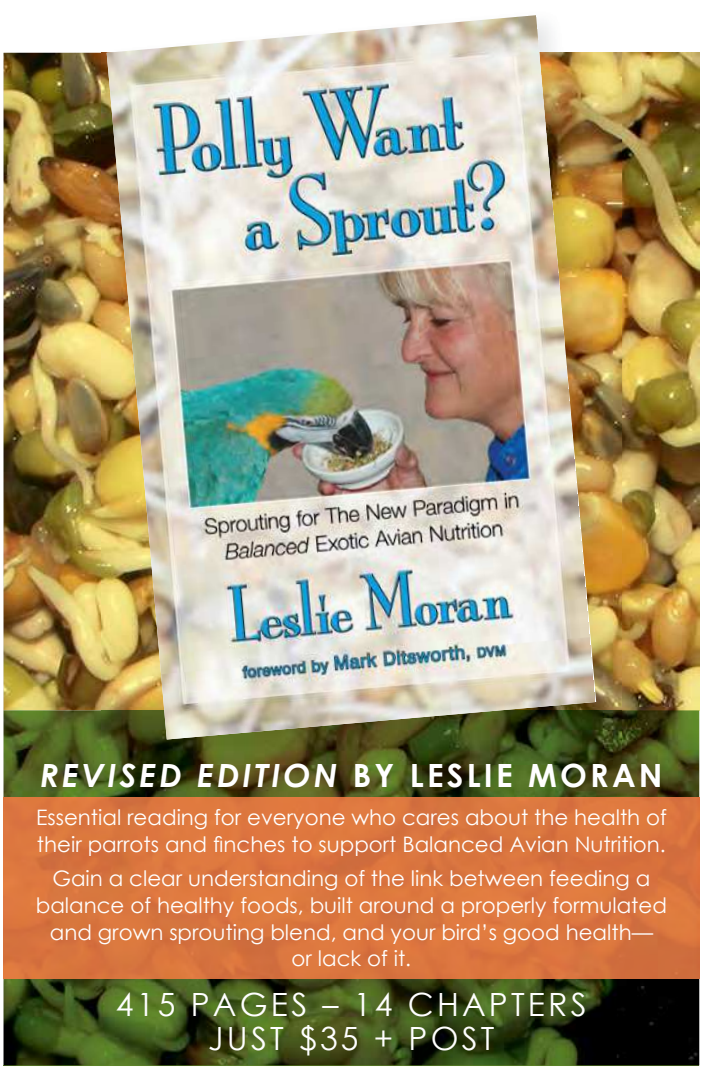
NEVER GIVE UP

Now that she is gone from our lives to a new home and owner, I cannot help but marvel at how a lot of extra months and an incredible amount of work and patience turned this cautious, tentative young Amazon female into a wonderful pet. *Faith* will always be her own bird, that is for sure. And she will certainly never put up with anything other than respectful care from her humans.

But when I think what might have happened if she had been born into a facility which had not had the foresight to see she was a troubled baby, it scares me. We aviculturists should never give up on our weary baby parrots, our late bloomers, our skittish, stubborn or fretful birds. We must resist becoming exasperated and moving them on before they develop the confidence and the readiness to make it out there. Indeed, these are the baby birds that need us most of all.

This is one of the worst ways to keep skittish babies in the nursery. They need towels or a soft toy for comfort and security

Faith learns about 'people food' and joins us in the kitchen



THE UNEXPECTED BENEFITS OF 'Tricks'

Teaching the bird to offer the foot comes in a stepwise procedure. Here is Banjo, our Blue and Gold Macaw, offering a foot and getting food treats for keeping her foot on the person's hand

One of the hardest parts of the training procedure is teaching your parrot to keep from playing with the nail file. We accomplish this by teaching them to look away from the file as it nears

AUTHOR & PHOTOS
HILLARY HANKEY

THINK you don't need to train veterinary behaviours? Think again!

I remember when my friend showed me her parrots' parlour tricks or, as I called them at the time, stupid pet tricks of waving a foot, flipping over on their backs, showing their wings. I thought to myself, 'cute, but what is the use of that?' As I've said before, I genuinely wasn't 'into' training in my early career.

As it turned out, my friend showed me how useful those little tricks were only a few weeks later when she trained her birds in voluntary nail-trims by offering those 'stupid little foot waves', as I had dismissively referred to them. When a blood feather showed damage, the wings out behaviour was the perfect foundation for the bird sitting quietly for examination. And flipping on their back? The parrots toweled up perfectly for restraint when asked.

My friend was not a professional and neither was I at the time. I was completely floored that this amateur could train her companions in this way. My thinking on training was changed. One of my cockatoos already offered his toenails nicely for filing, but it wasn't something that I had necessarily worked on. So, off I went, learning how to train nail-filing on my other birds.

REDUCING STRESS

Learning how much stress this took off our human–bird relationship changed my outlook both on my own capabilities and the way that I interacted with my parrots. Previously, I had handled nail-trimming one of two ways. Like many people, I was told to take my bird in every 3–4 months for regular grooming of nails, either to a groomer or the veterinarian. Under normal circumstances, if I chose to carry out the task myself (as the up-and-coming self-appointed behaviour and husbandry enthusiast that I was), I would be involved hands-on in the restraining and grooming procedure. Neither of these options was ideal, especially not on such a frequent schedule.

There is nothing wrong with having a bird groomer, or taking your bird to the vet. In fact, there are cases when these are necessary and important procedures. However, when it comes to options where we can train a voluntary procedure instead of restraining—especially when it is a necessary part of frequent care—we need to assess the impact of frequent restraint and coercive toweling on our parrot's overall wellbeing.

There is nothing remotely calming or stress-free about your bird being toweled against their will. If they do appear to settle down, it is only because the parrot knows it has no choice and resistance is a futile waste of energy. Signs of agitation include biting the towel or person, vocalisation, struggling to get free, and a generalised fear of towels.

So what can we do? Learning to have their nails filed voluntarily is a huge step in the right direction. I bet it will make your veterinarian happy too! While grooming does offer a chance for general evaluation, coming in quarterly for evaluations on a healthy bird is not necessary in most cases, and stress for parrots is stress for parrot-lovers—doctors and nurses included!

While our step-by-step nail course on the Avian Behaviour Lab is a video course that shows the trouble-shooting of what to do if, for instance, your bird wants to grab at the nail file, learning the basics is important.

This procedure can feel like we need more hands. Since we have trained our parrots not to reach at the nail file, we can keep food treats in our hand with the nail file and manoeuvre our hand accordingly to keep our timing crisp

NO NAIL-BITING INVOLVED!

Training a voluntary nail trim can be easier than you think! Our basic steps look like this:

1. With your parrot's favourite treats, reinforce them remaining calm and offering a single foot.
2. Once you have this down pat, start working with the toes and manipulating them.
3. With foot in hand, introduce the nail file coming close in the other hand. We are looking for the parrot to keep their beak up high and away from the file or emery board. If the parrot reaches for it, keep the nail file just out of reach, wait for the parrot to turn away and reinforce.
4. Touch the nail file lightly against the nail and reinforce the parrot's head position for looking away.
5. Swipe the nail file against the tips of the nails lightly once and reinforce the appropriate response.
6. Now we are ready to proceed carefully!

CONCLUSION

Training these fun behaviours can have a truly outsized impact on your parrot's wellbeing. The more we train together, the stronger our co-existence grows. Happy training and, as always, you can let your curiosity percolate with us in the Avian Behaviour Lab!

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Hooded Parrot pair—male on left
PHOTO JADE WELCH

Sex Bias & Breeding

IN A CHANGING WORLD

AUTHOR
ROSEMARY LOW

Hooded Parrot immature female (above) and male (below), show distinct difference in sexes
PHOTO ROSEMARY LOW

DNA sexing has been a giant step forward in parrot aviculture for more than 30 years. Of course, it is particularly helpful with monomorphic parrot species (where plumage is alike in male and female). However, it is also extremely useful for breeders selling young stock of sexually dichromatic species (where plumage differs from male to female) because they do not need to wait for young birds to moult into adult plumage before selling them.

In some parrot species, young birds resemble the female but acquire male or female plumage at the first moult. The age at which this occurs varies from several weeks to a few months, or even a couple of years after fledging.

Take the Hooded Parrot *Psephotella dissimilis* as an example. The male's plumage is strikingly more colourful than that of the discreetly coloured female. Young males start to acquire adult plumage at about 6–12 months (Forshaw, 2002). Some breeders prefer to have the young DNA-sexed before then. In this way, an imbalance (or apparent imbalance) in the gender ratio is revealed.

THE FEMALE BIAS

I received an email from a breeder in India stating that nearly all the young he bred were females (1 male: 4 females). Hooded Parrots are quite rare in India, but he contacted three other breeders and was told the same story. One person, he said, has three pairs of Hooded Parrots which produce two young in every nest (number of nests not stated)—and all are females. My correspondent also contacted a breeder in the USA who replied his ratio was also 1:4.

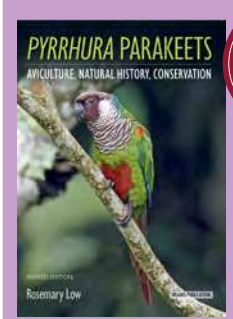
To gain a better sample, I contacted Gert van Dooren in the Netherlands, who operates the BirdGenetics laboratory. He gave me the results of birds he had sexed in his laboratory from August 2018 to December 2021. He pointed out that some breeders might not bother to test obvious males at an early age, thus his results may be skewed and are an indication only. He had tested 23 birds from eight breeders in Belgium and the Netherlands. The result was 12 males and 21 females. This showed more males than the Indian and American breeders reported, but still a definite bias towards females. However, he added, the numbers are perhaps too low to draw any firm conclusions. The ratio could be different in other years.

Nevertheless, this female bias is interesting. This year my Crimson-bellied Conure *Pyrrhura perlata* laid eight eggs. I replaced two early-laid eggs with plastic ones because I do not want large numbers reared in one clutch. In one egg, the embryo died. The other five eggs hatched, and all the chicks were reared. I had them sexed by Gert at BirdGenetics—all were females! In the past this pair produced approximately equal numbers of males and females.

Results over a long period from one pair are hard to come by. Breeders with such records please come forward!

In the UK, Bernard Sayers told me that his unrelated pair of Rainbow Lorikeets bred exactly 50 young before he parted with them earlier this year. He said there was a female bias, with only about one-third of chicks being male. He thought that results from unrelated pairs could be different from those that were inbred.

One of the species in his collection that bred over a long period was the Australian Boobook Owl *Ninox boobook*. He reared more than 200 young—supplying many of the zoos in Europe with this species. He said that the sexes produced were approximately equal when taken over three-year periods.



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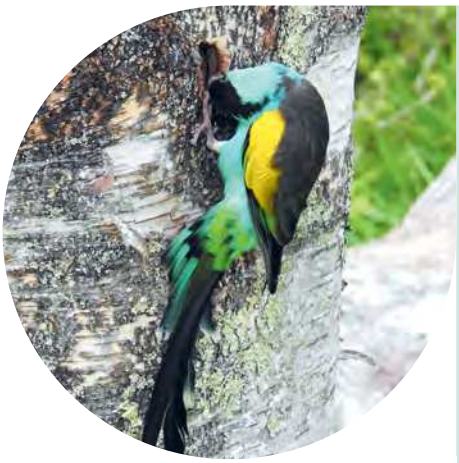

A male Hooded Parrot gnaws at a possible nest site
PHOTO ROSEMARY LOW

INFERTILITY IN A SHRINKING WORLD

Gender of the avian young we breed is interesting—but first we must get these chicks! Some breeders have not had a good season, with many infertile eggs. There are varied reasons for clear eggs. A very basic one is that male and female do not come into breeding condition simultaneously.

These days many people breed parrots in cages in enclosed buildings. How different to the 19780s and 1990s when breeding Australian parrots was enormously popular. The UK Parrot Society's Breeding Register of birds bred by members (some, not all) show that the highest totals reported were in 1991–1993. The majority of these were Australian parakeets and Cockatiels. One of the reasons these were so popular is that they bred so well.

Australian parrots, except the *Neophema*, were maintained in lengthy aviaries, with a minimum of 20ft (6m) up to 30ft (9m) flights. So much has changed since then. In the UK, garden sizes have diminished greatly and the wood that was used to construct aviaries (before aluminium was available) was not as expensive.

GOODBYE TO THE 'GOLDEN YEARS'

I have been rereading with interest articles written by renowned breeder John Walton, reprinted in recent issues of the UK Parrot Society's magazine. He described the 1980s as 'the Golden Years'—and indeed they were for aficionados of the larger Australian parrots.

In November 1985, John completed another block of four aviaries, each one 8.4m (26ft) long x 1.2m (4ft) wide. In these he housed rosellas and Blue-bonnet Parrots. In other long aviaries he kept those most elegant birds—Superb Parrots and Regent Parrots—and described something that I found particularly interesting. Both species 'spent considerable periods of time courtship flying'. This occurred at least 3–4 times daily, with the average duration of 20 minutes. 'In some instances, they would fly together without alighting on the end perches... it was fantastic to see their co-ordinated side-slips as they made the steep turns at the end of the flight,' he wrote.

These courtship flights were not only wonderful to observe, they ensured that male and female were 'breeding fit'.

More than 200 Boobook Owls produced over three years showed almost equal sex ratio
PHOTO DAVID PACE

They might be an important part of the courtship behaviour which is lost in the small flights that many breeders use today. Perhaps this is why some pairs do not synchronise their breeding condition.

CONTRASTING LIVES

In my opinion, for birds like the larger Australian parrots to be breeding fit, they need access to long, outdoor flights all year round. And they need flying exercise. This is what my Crimson-bellied Conures have. The outside flight of this small Brazilian species is only 4.5m (15ft) long—just adequate for these very skilful flyers which use every part of the aviary. They choose to go outside every day even in winter, regardless of the weather, unless it is very windy or very hot. They are shut inside every night.

Contrast this with another mature pair of the same species with a different breeder who lives six miles from me. Their birds are kept in a cage in a birdroom during winter. In about April they were transferred to a modestly sized outdoor aviary. Copulation was observed but by August no eggs had been laid. We cannot be sure of the reason for this lack of success. My guess is that the female was not in breeding condition. No doubt some pairs of this species kept permanently inside do breed—but we should always aim for optimal conditions for our birds. In my opinion, that means permanent access to the varied weather conditions that we know. They help to make our birds strong.

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AUTHOR'S NOTE

My photographs were taken at Paradise Park in Cornwall, UK. It was a joy to see the Hooded Parrots foraging in a large aviary with logs to gnaw. Curator David Woolcock advised in August 2022 that to date the Hooded Parakeets had produced 14 male and 8 female chicks—mostly males!

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The Aussie Magpie

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PhD, BSc & BA

PHOTOS
DANIELLE 'THE MAGPIE WHISPERER'

The three tenors—the Australian Magpie is highly intelligent and charismatic

THE Australian Magpie *Gymnorhina tibicen* is undoubtedly one of our most common and iconic birds. There are currently nine subspecies distributed across most of the country. These birds are both revered and maligned. There is nothing more Australian than hearing the beautiful warbling call of a magpie in the morning, nor hearing the swoosh and angry clack of a sharp beak of a magpie swooping you on your morning bike ride or otherwise leisurely stroll!

Part of the Australian Magpie's appeal is how charismatic, playful and smart these distinctive black-and-white corvids are. This article will provide examples of their intelligence, and hypotheses for how such smarts evolved.

SONGMASTERS

Magpies have a highly complex vocal repertoire, in both calls and mimicry. In fact, mapgies are known to mimic the call of over 35 other species—including not just other bird species but dogs and horses (as I witnessed at Armadale Reptile and Wildlife Centre in Western Australia).

Magpies have a whole range of different vocalisations which they use in specific contexts to communicate. Their species-specific calls include warbling, carolling and the begging call of chicks. Their songs can have a very complex structure, and pitch can vary by as much as four octaves. Magpie pairs will carol together to advertise their presence to other magpies, adopting a characteristic posture with their head tilted back. Magpie groups will sing a short, repetitive carol at dawn and dusk. When a threat is spotted, they will produce an alarm call, and these calls differ depending on the type of threat.

Professor Gisela Kaplan is a respected ethologist (behaviour expert) specialising in birds and primates. She published the 'magnum opus' on Magpies—*Australian Magpie Biology and Behaviour of an Unusual Songbird*—and has spent over two decades studying them. The second edition of the book, according to publishers the CSIRO, has new chapters on classification, cognition and caring for young. It also reveals the magpie's 'extraordinary capabilities', including its complex social behaviour, and the latest research and information on magpie development and health not published previously.

OUTSMARTING PREDATORS

Magpies must have evolved their intellect by natural selection in a wild context. Studies by Koboroff, Kaplan & Rogers (2013) have shown that magpies will not only emit different alarm calls to alert other members of their group that there are predators in the vicinity but will react with different strategies according to the type of predator. Snakes, for example, rarely attack magpies, so while magpies will raise an alarm, they rarely 'mob' snakes. Goannas, on the other hand, can include magpies in their diet. (Studies have

found birds can comprise 18% of the goanna's diet.) When magpies see a goanna, they will circle and mob it at ground level. (Mobbing is essentially the noisy, and obvious behaviour birds use to defend themselves and/or their offspring from predators and can include alarm calls and flying at the 'predator' to harass and divert its attention, sometimes making physical contact and, depending on the bird species, even defecating or vomiting on the predator. It can start with just two birds but often attract many more, sometimes across different species.)

Predatory birds are the main species to target magpies, and the research found these elicit the greatest defensive behaviour. Magpies will gang up and swoop at these aerial predators, and adapt their level of mobbing and flight patterns in accordance to the type of avian predator (Goshawk, Little Eagle or Wedge-tailed Eagle). Koboroff, Kaplan & Rogers conclude, 'magpies show a sophisticated anti-predator repertoire and can readily adapt their behaviour depending on circumstances'. This 'arsenal of anti-predator defences, based on prior knowledge of predator behaviour...(and) variation in the type of mobbing rather than varying mobbing intensity, suggests a very complex and considered response to perceived risk'.

MISCHIEVOUS MAGPIES

As someone with pet bird and dog species, including breeds that are considered highly intelligent, I can say that sometimes having a smart animal can present certain challenges! Smart animals tend to get up to all kinds of mischief, and magpies are no exception.

My absolute favourite demonstration of 'magpie smarts' is when a group of these birds outwitted the scientists trying to study them! In 2019 Dr Dominique Potvin and her team attached miniature tracking devices, which they had spent months perfecting to make them unobtrusive, to conduct radio-tracking studies on magpies. While the birds couldn't take the harnesses off themselves, they partnered up and successfully helped take the harnesses off each other, a mere 20 minutes after the scientists had carefully put them on!

To achieve this, the 'helping magpie' found the only weak point—a single clasp, barely a millimetre long—on the harness, and snipped it with its beak. After six months of work and planning, in just three days the five custom-designed, expensive tracking harnesses had been dismantled by the magpies! Not only does this demonstrate problem-solving but altruism—the helping magpies didn't have harnesses on and received no tangible benefit from removing the harness from their magpie mates (except maybe the joy of thwarting the experiments of so-called intelligent humans). As Dr Potvin states, this behaviour was 'a special combination of helping but also problem-solving, of being really social and having this cognitive ability to solve puzzles'.

A touching example of magpie curiosity is provided by Prof Kaplan. She describes how a resident magpie that visited her garden once entered her house where she was typing on her computer and sat there watching her. Prof Kaplan had to leave the computer to answer a phone call and, when she returned, the magpie had taken her spot at the keyboard and was gently pecking the keys and looking at its 'prose' on the screen!

Another of, no doubt, many anecdotes of mischievous magpies was a report of magpies dropping rocks on the roof of a family's house when they were late to feed them.

PLAY TIME

Something that smart, social animals tend to do is continue to play well into adulthood. Magpies love to play. Prof Kaplan documented how magpies like to play chasey, where a magpie will find a leaf, fly off and hide it, and others will chase it to try and find the leaf. As she charmingly describes, 'They often vocalise while they're doing this, and when they find the other, they squeak and squeal and have wonderful fun. Significantly, they understand that an object that was initially in their field of vision and then disappeared is actually still there'—object permanence.

WHY ARE MAGPIES SO SMART?

Interestingly, it appears magpies share some of the factors believed responsible for human intelligence.

Shower time! Adult magpies love to play ... a characteristic they share with other smart animals

Having fun with a hanging towel

Long-term Pair Bonds
Firstly, magpies have long-term pair bonding. This requires emotional intelligence, the need to work together, resolve conflicts, anticipate and interpret the actions and reactions of your partner, and co-operate successfully in order to raise offspring that, in turn, can navigate the world and their future partnerships. Magpies don't do hook-ups—a male and female will decide to pair up and, if they are still young, may be in a relationship for years before starting a family. They also have little practices they engage in to maintain their romance, and will sing, sleep, feed and fly together. Prof Kaplan states, 'co-operation, and long-term bonds in couples is as good for birds as it is for humans. The strategy has arguably led both species to becoming the most successful and widely distributed on Earth'.

Teaching Offspring
With long-term pair-bonding, mapgies can raise families and teach the offspring, rather than young having to come pre-programmed with a set of behaviours. This allows the birds to adapt to changing environmental or social circumstances without having to rely on the right genes and the longer timeframes involved in intergenerational adaptation by natural selection. With a solid pair bond, the parents can care for their offspring for an extended period, raising smart offspring in turn.

Year-round Base
These pair-bonded, social birds own a territory year-round which provides a base, and year-round access to resources. But holding onto a territory is no small feat. It requires vigilance, a good memory, learning about enemies, remembering which birds are neighbours, the boundaries of the territory, what constitutes an incursion, and effective vocal communication.

There is a solid relationship between strong social bonds and successful territory ownership, with the health, survival and cognitive development of offspring creating a positively reinforcing feedback loop between cognition and fitness. Extensive field studies by Prof Kaplan revealed that it took three months post-fledging for juvenile magpies to learn about territoriality and recognise friend vs foe, neighbour vs. stranger, based on vocalisations.

Group Living
Magpies also live in social groups. Offspring stay in their natal group with their parents for a long time—about a year—and then disperse to join another flock. Research has revealed that the larger the social family group, the smarter the birds, where social group living trains the birds to be smarter.

Professor Mandy Ridley, from the University of Western Australia, is one of the leading researchers studying cognition in mapgies. She and her colleagues tested 56 individuals of the WA magpie subspecies *Cracticus tibicen dorsalis*. These birds were from 14 different social groups that differed in number from 3–12 birds. Researchers carried out four cognitive tests—a detour-reaching task (a test of inhibition), an associative learning task (associate the colour of the lid with reward), a reversal learning task (switching the colour-reward association from the previous task), and a spatial memory task (find the correct well in a 10-well board).

Findings included that the success of an individual was correlated across all tasks, suggesting a general intelligence, like the GI score concept in humans. Secondly, an individual bird took fewer trials to solve the task if it lived in a larger group. Researchers also discovered that being smarter had benefits—females that performed better on the tests were more likely to raise fledglings to independence.

Social Ties
With their long lives (generally up to 25–30 years) and social intelligence, magpies form loving pair bonds, friendships and close family bonds. The mother-daughter bond is particularly strong. During Prof Kaplan's studies, she documented a mother magpie seemingly forming a close friendship with one of her daughters. They were inseparable, spending most days together. And while magpie parents usually won't let the kids stay at home after they reach one year of age, she let her stay on an extra year.

Magpies can also form friendships with humans, as depicted in the 2020 film *Penguin Bloom*, but also often anecdotally reported. See our story on Paul Mander, who trained the magpies in *Penguin Bloom* as well as pelicans for *Storm Boy*—***ABK*** vol. 34, no. 9, p. 534.

Making friends with a magpie is a good idea—studies have found that magpies are less likely to swoop on people they know. Conversely, if magpies have cause not to like you, they will remember that too!

Morals
As a group-living species that needs to maintain societal relations and a social order, magpies can be considered to have morals. Prof Kaplan has reported an instance of magpies even apparently 'holding court'. She describes a group of 10–20 magpies standing in a circle surrounding 'the perpetrator'. Each magpie would go in and peck the magpie in the centre, and once they had all exacted punishment, they flew away, leaving the bird alone (to contemplate its poor life choices, perhaps).

Stressors
Like humans, mapgies can suffer loss of cognitive performance when facing certain stressors, such as sleep deprivation. In a recent study, adult magpies were trained on a task and then tested on a reversal learning task. Birds that were sleep-deprived appeared to lack motivation, being less likely to even attempt the task, or complete it. Those that did attempt it were slower to do so and performed worse than rested birds.

Best friends
PHOTO DANIELLE THE MAGPIE WHISPERER

Another study found that magpies' cognitive performance is impaired when they are heat-stressed. This has concerning implications in light of rising temperatures with global warming from climate change.

INTELLECT & SURVIVAL

The abilities to co-operate and problem-solve have given magpies an edge over many other birds. Tragically, many native bird species in Australia are suffering declines in abundance and distribution as humans modify their natural environments. Magpies, however, are doing well. While they are adversely impacted by roads, pesticides, and poor nutrition, they are still a common sight across a whole range of habitats, including urban and agricultural ones, and data suggests their population is overall increasing.

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WHEN DISASTER STRIKES

Managing a Disease Outbreak

AUTHOR & PHOTOS
DR BOB DONELEY
BVSc FANZCVS
(Avian Medicine) CMAVA

EACH year I deal with several cases of disease outbreak in bird collections. Coccidiosis in a finch aviary, psittacosis in a group of pet parrots, viral infections in a handrearing nursery, respiratory infections in a backyard poultry flock, or Beak and Feather Disease in a lorikeet aviary. All of these are real scenarios that I have assisted with, and ones that will be familiar to many avian veterinarians around the world.

Management of contagious infectious diseases—diseases caused by infectious agents that spread from bird to bird—continues to be one of the biggest challenges facing collections, both small and large. Every collection is at inherent risk to the introduction of contagious diseases whenever there is an intake of birds from outside the collection. Many infected birds may be in the pre-symptomatic incubation period on admission and thus not be recognised as an infection risk. The consequence may be an explosive outbreak of the disease in the whole collection, with dead, dying, and sick birds cropping up daily. This represents a devastating emotional and financial loss to the owner. However, it can generally be prevented by some planning and preparation.

RISK FACTORS FOR DISEASE OUTBREAK

Several factors can predispose birds to a disease outbreak. These include:

Inadequate Quarantine Practices

Thinking that because a bird looks healthy, it must be healthy, is a common mistake made by nearly every bird keeper. As I have said many times, birds are masters at hiding signs of disease. In other cases they may not even be feeling unwell. So, a quick glance at the bird as it is taken from a transport carrier to be placed directly in an aviary or cage is a recipe for disaster. All new birds, regardless of their origin, must be physically, geographically, and managerially, kept separate from the existing flock for at least six weeks.

Overcrowding

This increases bird contact and stress and, at the same time, decreases the owner's observation and care capacities. Under these conditions, a bird may be sick for several days before it is noticed. In the meantime, it has infected birds around it (which then infect birds around them). This is known as a disease multiplier.

Ineffective Sanitation

In the wild nature's stocking density is low, which reduces the concentration of pathogens (germs) in the environment. Contagious infectious diseases are
therefore uncommon in wild birds. But when we concentrate birds into an aviary—regardless of how many birds we keep in how big an enclosure—we exceed nature's stocking density and raise the concentration of pathogens in the environment. The only way we can minimise the likelihood of an outbreak of disease is by reducing this pathogen concentration through effective cleaning. Remember, *'The solution to pollution is dilution'*.

Failure to Promptly Remove Sick Birds

As I said earlier, a sick bird is a disease multiplier. If you have one sick bird, soon you'll have three, then nine, then over a dozen. To prevent this, sick birds must be removed from the collection and isolated while being treated.

STRATEGIES FOR CONTROL

Diagnosis

This is essential for successful control and resolution of disease outbreaks. Timely diagnosis substantially impacts how many birds will become infected. Late or lack of diagnosis increases the number of sick and exposed birds and ultimately the number of deaths. Having the correct diagnosis ensures that:

a. The proper treatment is provided,
b. The most suitable disinfectants are used, *and*
c. Preventative measures can be used to avert a recurrence.

Knowing what pathogen is involved allows the veterinarian to give better information to the owner about prognosis, time until recovery, how the infection is spread (through food, air, water etc), the disease incubation period, and how long the infected bird will shed the disease.

Many bird owners baulk at the cost of getting a diagnosis, usually because they only see it as an investment in that one bird. What you must realise is that, in the case of a flock disease, the entire flock is the patient—the individual bird is merely a laboratory test. The cost of diagnosis, therefore, needs to be thought of in terms of the price tag across the whole flock.

A SAD BUT TRUE STORY

An aviculturist once brought me a parrot which had been sick—it had died on its way to the clinic. The owner commented, 'Just like the other six!' I asked what he meant. He told me he had bought seven birds, and six had died over the last two weeks. He had brought me the survivor, only to have it die in the car. A post-mortem confirmed the cause of death was psittacosis.

I had to point out that, if he had brought in the first bird when it died, the cost would have been the same, but we would have saved the other six birds and not put him at risk of a zoonotic disease!

Controlling a disease outbreak in an aviary set-up like this requires rapid and positive action

Respiratory infections in backyard poultry are commonly associated with the introduction of new birds without quarantine

An effective quarantine area—physically and geographically separate from the collection—is the first step in preventing disease outbreaks

Isolation of Sick Birds

Prompt removal of sick birds from the general population is the single most important step in controlling a contagious disease outbreak. It significantly decreases opportunities for transmission to other birds and reduces the pathogen load in the environment. Leaving sick birds in the general population guarantees the spread of infection to others and perpetuation of the outbreak.

Infected birds should be isolated for the duration of pathogen-shedding. Confirmation of shedding cessation can be determined by testing for the pathogen in the same manner as for the initial diagnosis.

Quarantine of Exposed Asymptomatic Birds

The benefit of isolating sick birds for disease containment is undermined if asymptomatic exposed birds remain in the general population. Exposed birds may not yet be ill because they are in the pre-clinical incubation period, they have a subclinical infection, or they are immune to infection. All exposed birds should be considered an infectious risk and quarantined to protect other birds from exposure.

The quarantine area must not be the same as the isolation area (used for symptomatic birds). However, the quarantine time is equal to the pathogen's maximum incubation period. Quarantined birds should be monitored daily for signs of disease. Sick birds should be promptly removed to isolation and the quarantine clock restarted for the remaining birds, since there was a new exposure.

Assessment of Infection Risk in Exposed Birds

Quarantined birds can be assessed for their risk of infection. This provides a cost-effective strategy for quickly moving birds out of quarantine, relieving the strain created by utilising housing for quarantine. The risk assessment is based on two approaches:

- Tests for pre-existing protective antibody titres to the pathogen (serology). However, these tests are often not available for birds.
- Tests for the pathogen itself (PCR).

Although no risk assessment is 100% accurate, when used and interpreted appropriately, these approaches can predict in most cases which birds are safe to release and which birds are at risk.

Quarantined birds can be assessed using the same test used to diagnose the pathogen in the sick birds. Birds that are PCR-negative are low risk and can be moved out of quarantine. Those that are PCR-positive are shedding the pathogen and should be moved to isolation, while the quarantine clock for the remaining birds is restarted.

Create a Clean Break to Prevent Further Exposure

The cornerstone for prevention of further spread of infection is the creation of a clean break. This is defined as protection of unexposed birds and new arrivals from exposed or infected birds by housing them in a physically contained clean room. Ideally, no new birds should be admitted until the outbreak is resolved.

Biosecurity and Environmental Decontamination

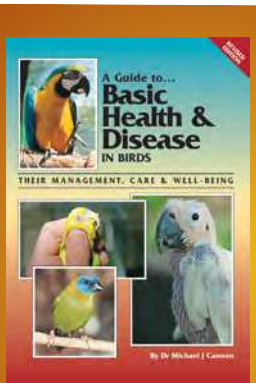
Biosecurity and effective sanitation should be practiced at all times but it is paramount during a disease outbreak. It consists of:

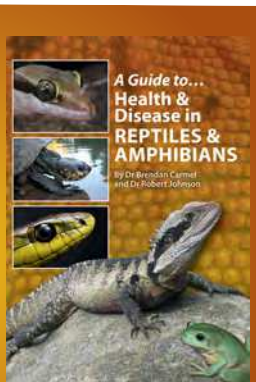
- Traffic Flow—the owner should care for birds in the clean rooms first, followed by quarantine, with isolation last.
- Barrier Care—clothing and equipment should not be shared between different areas, and/or PPE should be utilised in isolation areas.
- Sanitation—effective sanitation reduces infectious doses of pathogens in the environment. After thorough cleaning, dishes, carriers, handling equipment etc, should be thoroughly disinfected using a chemical recommended by a veterinarian. Contact times for these disinfectants should be adhered to.

When is the Outbreak Over?

By convention, a disease outbreak is declared over when a period of twice the incubation period of the pathogen has elapsed without identification of any new cases. However, for pathogens with short incubation periods of 7 days or less, a period of three times the incubation period is preferred.

Health & Disease Books from ABK





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African Firefinches

AUTHOR & PHOTOS
PETER ODEKERKEN

THE African Firefinch is classified in the *Lagonosticta* genus, family Estrildidae, and solely found in Sub-Saharan Africa. There are 10 or 12 species depending on opinions as to whether a separate species is justified instead of subspecies status. This applies to the Black-faced Firefinch *Lagonosticta larvata* which in the past has been considered the nominate, with *L. l. nigricollis* and *L. l. vinacea* as subspecies. I will leave this debate to taxonomists that delve into DNA to conclude.

The Vinaceous Firefinch L. l. vinacea male from Senegal and Mali is much sought-after

Red-billed Firefinch male—this is the form found in Australian aviaries

This Chad Firefinch female has red in its plumage whereas in other firefinch species, females have minimal red on the body
PHOTO NIGEL VOADEN

Chad Firefinch female has red in the plumage whereas in the other firefinch species, females have minimal red on the body
PHOTO NIGEL VOADEN

Black-bellied Firefinch L. rara male

IN THE WILD

Habitat & Status

Firefinches live in a variety of relatively dry habitats such as *Acacia* woodlands, savannah grassland and rocky outcrops with numerous scrubs, and generally larger trees, but always close to water. They need the scrub for protection, security and nesting, and frequently it has deterrents such as thorns.

Firefinches feed in small flocks, predominately on grass seed, and are generally found with other seedeaters such as Blue Waxbills, *Pytilia* and *Estrilda* species. Firefinches predominately feed on the ground but have been observed sitting on a branch next to a seed head feeding. They have also been recorded dislodging seed by shaking the seed head and picking up the dislodged seed off the ground.

Firefinches are frequently found close to human habitation. Indeed, they have been recorded within arm's length of local women at work grinding grain, with the firefinches feeding on small crushed grains spilled by the women. In impoverished rural areas of Africa this is a daily chore for many.

Firefinches are hardy little characters that have adapted to dusty dry conditions, although they are never far from permanent water. They are cold-tolerant, as many areas they occupy are at higher elevations, even though they may be in a tropical zone. These areas are very dry in the winters so they are not really subjected to cold, wet conditions—an important consideration for aviculturists in considering their requirements. These birds will not do well if kept in cold, wet conditions and many losses can occur.

It is a joy to find a watering hole at the end of a dry winter and watch the birds of the surrounding area come in for a drink or a bath. Sitting quietly at such a waterhole can be very rewarding in seeing a large number of species in close proximity, especially if you use a hide or sit very still.

Generally, the genus has a stable status throughout its range but some species with limited ranges such as the Rock Firefinch *L. sanguinodorsalis* may become vulnerable.

Description

Males are more colourful than females (which are a duller brown in the body) and sport red in their plumage. However, females do have red tails and sometimes show a little red in the head in some forms. Most forms have white spots on the sides of the breast, with some of these spots venturing onto the breast, particularly noticeable in the Bar-breasted *L. rufopicta* and Brown Firefinches *L. nitidula*.

Diet

Firefinches are seed-eaters—whether the seed is green or dry—and forage predominately on the ground. Small insects such as termites, ant pupae, succulent herbs and bits of grass, as well as small berries are also consumed. In Africa on summer evenings, it is not unusual to see many softbills and seedeaters hawking flying termites and chasing after them on the ground as the termites lose their wings. This usually occurs just before a storm and during the rainy season. I feel that protein in this form is essential, and this corresponds with the finches' breeding season.

The Blue-billed Firefinch *L. rubricata*

Brown Firefinch *L. nitidula* male—note the white spots on the flanks and breast

The lovely delicate pink colouration of a male Jameson's Firefinch *L. rhodopareia*

Black-faced Firefinch L. larvata nigricollis male
PHOTO NIGEL VOADEN

Courtship

Firefinches breed after the summer rains when seeding grasses proliferate, although the time of year varies a little because Sub-Saharan Africa covers such a huge area. In Southern Africa the breeding season usually runs from December to April.

The male picks up a stem of grass or a delicate, fluffy feather and flies around to impress the female. He sometimes utters soft calls and holds the feather or stem aloft with his head held upright, often bobbing up and down by extending his legs or moving his head from side to side. Sometimes you can hear his wings when he vibrates them or does a display flight near the female.

All the while, the female watches the performance. The male will angle his tail towards the female. If the female is satisfied by the courtship display, she will bow and vibrate her tail quickly up and down. The male will place the feather or grass in front of the female and copulation follows.

Nesting & Chicks

The firefinch pair builds a spherical nest with coarse grasses, twigs and small leaves. This is usually the male's task, with the inside lined with softer grasses and material that he brings to the female. Fluffy, light-coloured feathers are used to line the inside of the nest for warmth and comfort in which to incubate and rear the brood. Guineafowl feathers are often used for lining.

Nests are usually placed in dense scrub, with thorny foliage preferred for obvious reasons. These scrubs seldom reach above 3–4m in height. Firefinch nests are parasitised by seed-eating finches belonging to the genus *Vidua*, commonly known as Indigo Birds.

Firefinches have also been known to build a nest in a scrape on the ground, with heavy foliage hiding the cup-like scrape. Nests can even be built inside the indigenous people's huts, despite them being used daily by humans. Storage huts or those used for livestock are preferred.

Four to six small, white eggs are laid and hatch after 12–14 days. Chicks fledge after 17–20 days. The chicks have distinctive mouth markings to stimulate a feeding response from the parents. They leave the nest in close company with their parents, begging frequently to be fed. They usually become independent in 35–40 days.

Chicks are dull brown with red tail feathers. They change into adult plumage after about three months. It has been noted that the length of the moult period varies depending on the time of year the chicks fledge. A full moult may take longer in colder periods, when losing feathers could be detrimental to the young bird.

Jan Muller's beautifully constructed, large, planted aviaries in Gauteng, South Africa

IN CAPTIVITY

Red-billed Firefinches

Unfortunately, we in Australia have very little opportunity to keep a strong genetic breeding nucleus of African Firefinches because importation is not allowed. As far as I am aware, we really only have the Red-billed Firefinch *L. senegala* available in aviculture. It has been a favourite for Australian foreign finch enthusiasts for many years. The genetic pool seems reasonably strong—however, it is now more obvious that it is difficult to get pure birds as they are throwing pied markings. Aviculture must keep a pure strain available. Certainly, breed Pied mutations but be mindful to not lose the pure form as we are unlikely to replace them as long as the authorities frown on importation.

Housing

The Red-billed has proven to be a great subject for mixed species in a large aviary. They are inoffensive little characters and seldom show any aggression towards others. Of course, better breeding results can be achieved by keeping a species on its own without outside interference, but generally aviculturists like to have a number of species to admire in an aviary, so not many keep them separately.

Red-billed Firefinches can handle the cold provided it is not wet and the aviary is dry, with protection from draughts. They are unlikely to enjoy temperatures throughout the day and night below 10 degrees. I wouldn't recommend keeping them in outdoor aviaries in Thredbo for example—fine in summer but deadly in winter if not heated! Fortunately, in most of Australia, we can have a cold night, but the days are sunny and warm up to the high teens or above.

Aviary floors should be kept clean because, as mentioned, Firefinches will spend most of their time exploring the area.

Breeding

Choose carefully when selecting other inhabitants for a mixed aviary so that the Firefinches are not dominated, or worse, actively chased by other species. Mixed collections do work but all species must be assessed on how they will fit in. For example, New Zealand Kakarikis, in my experience, are very tolerant towards finches. However, they are so inquisitive, always scratching about, that they can become overly interested around a finch nest and breeding results will be affected.

Firefinches will nest in boxes, baskets, scrub and dry brush placed high in the aviary. Make sure there are coarse and fine grasses, bits of paperbark, and fluffy feathers available for construction.

Diet

Red-billed Firefinches will need a good quality seed mix, with greens as often as possible. Provide soaked, germinating seed on a regular basis, with live food frequently, and the birds will do well. Clean water and additional calcium in the form of cuttlefish bone or, preferably, a calcium source such as Passwell's Liquid Gold added to the drinking water is recommended.

If live food is difficult, egg and biscuit mixes will provide extra protein. I prefer to mix Passwell's Soft Food Mix with hard-boiled eggs at least weekly, and more frequently with the onset of the breeding season, with chicks in the nest and while the young are gaining independence. Chickweed is also great in winter when it proliferates, and dandelion and green seed heads are greatly appreciated.

Final Thoughts

When living in South Africa I was lucky to keep the Blue-billed form *L. rubricata*, which is slightly larger than the Red-billed Firefinch. They were in a mixed collection of other small finches with Blue-crowned Hanging Parrots and, without doubt, my favourite occupant. The aviary was about 5m long x 2m wide x 2.1m high. The concrete floor had a gravel and earth layer and had dry brush placed throughout the aviary.

I remember their lovely tinkling calls as they hopped around on the floor very secretively, out of sight and then traversed an open area into more cover. It was like watching them in the wild...but close up. This, in my opinion, is the way to keep and enjoy birds in a planted aviary, with live or dry foliage. To me the birds in these sorts of aviaries have a great life if fed properly and housed without stress from aggressive species.

Sitting with a cup of tea, watching the occupants doing their daily activities—there's nothing better in bird keeping! abk

This juvenile Red-billed Firefinch shows the typical plumage characteristics of young Firefinches, no doubt adapted to help protect them from predation

WELTVOGELPARK WALSRODE

A MUST-SEE FOR ALL BIRD-LOVERS

AUTHOR & PHOTOS
LUBOMIR TOMISKA

Pink-spotted Fruit Dove

WELTVOGELPARK Walsrode is well known to most European aviculturists. It doesn't matter if you keep parrots, finches or birds of prey, everyone will find species of interest here. For me, each visit is a great inspiration. Mostly I am interested in parrots but there are many varieties of bird here in one place—you realise that all of them are interesting. It is considered the largest bird park for land area and species, although Jurong Bird Park in Singapore claims the largest number of birds.

The Walsrode Bird Park was founded in 1962 by businessman Fritz Geschke. His first intention was to keep pheasants and water birds but later his daughter and son-in-law became involved and the park started growing rapidly. Due to financial issues, the park's ownership has changed three times between 2000 and 2019. Today, it is owned by the Spanish company Parques Reunidos which operates more than 60 zoos and amusement parks worldwide.

The bird park is situated in the north of Germany, approximately 100km from Hamburg. I live in Prague, and it takes around six hours of driving to get there—a long trip but definitely worth it. I recommend finding accommodation in Walsrode or nearby. The park covers 24ha and if you want to see all parts and attractions, you need a full day.

I have visited Walsrode Bird Park many times, first in 2008. Over this period, it has changed a lot. As a big fan of lories and lorikeets, when I first visited there was a large atrium focused just on these birds. I saw such rarities as Blue Lorikeets *Vini peruviana*, Striated Lorikeets *Charmosyna multistriata* and Plum-faced Lorikeets *Oreopsittacus arfaki*. Today, these species have almost vanished in captivity.

The building called 'Pukara' remains a highlight of the park but most of the lories and lorikeets have been replaced by other nectarivores and frugivorous birds like fruit doves, tanagers, manakins, trogons, and others. In general, it is obvious that the park is not as focused on parrots as it was in the past, but the parrot house still presents interesting and rare species. The atrium does not have outside aviaries, just inside exhibits that are heated during the winter. The temperature here can fall below zero and the above-mentioned species are sensitive to low temperatures.

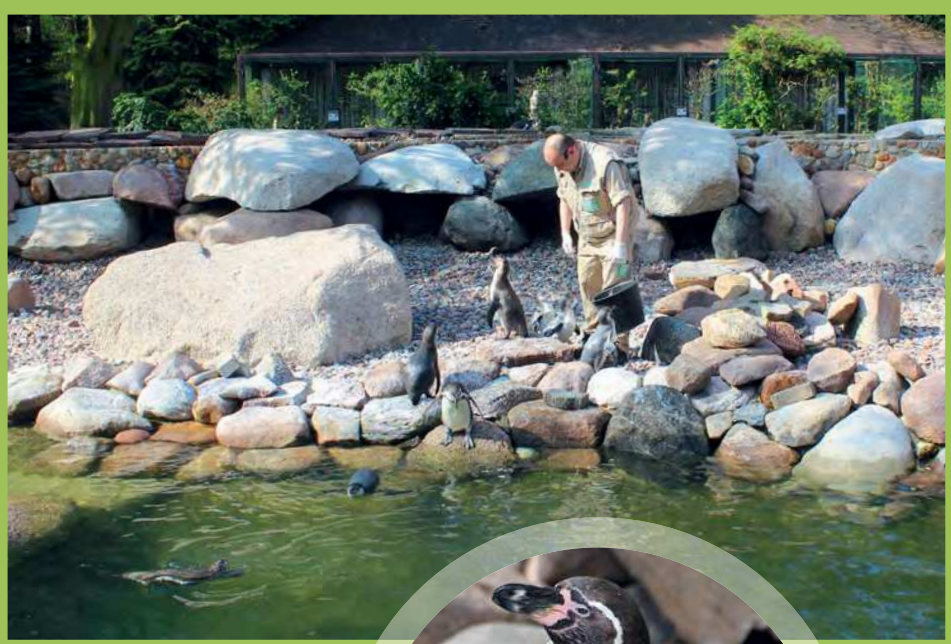
The gardens at Weltvogelpark Walsrode are a delightful sight

This Sparkling Violetear is an inhabitant of the hummingbird aviary below

One of the most interesting attractions of the bird park is the Hummingbird house. Keeping this group of birds is very rare in Europe, and the Walsrode park is doing so at a very high level, with successful breeding of several species. The facility reminds me of a laboratory rather than an aviary. Hummingbirds are super-delicate birds, so all factors like diet, hygiene, air quality and temperature are strictly controlled.

You won't just see exotic species but also European native birds at the park, which is great because sometimes we go crazy about animals living in exotic countries and forget about our own fauna. A large area is dedicated to aviaries with European storks, pigeons, kestrels, partridges, pheasants, and many others.

After descending from the area with native species, you get to a complex of several ponds where you can observe a nice collection of water birds, especially pelicans and flamingos. Species include the American Flamingo *Phoenicopterus ruber*, Chilean Flamingo *P. chilensis*, Greater Flamingo *P. roseus*, American White Pelican *Pelecanus erythrorhynchos* and Dalmatian Pelican *P. crispus*. In the same area, you can also see an exhibit with Humboldt Penguins *Spheniscus humboldti*.



Interactive feeding of Humboldt Penguins

American Flamingos are one of many waterbird species on exhibit

Pesquet's Parrot

Raggiana Bird-of-Paradise

Orange-breasted Fig Parrot

Green-backed Trogon

Channel-billed Toucan

THE PARROT HOUSE AND JUNGLE TRAIL

As a parrot breeder, I must mention the parrot house. There are a few outside aviaries but the majority of birds are kept inside. All cages are decorated with plants and have a natural stone background. The collection includes many interesting and rare species like Pesquet's Parrot *Psittrichas fulgidus*, the Slender-billed Conure *Enicognathus leptorhynchus*, Blue-bellied Parrot *Triclaria malachitacea*, Blue-cheeked Amazon *Amazona dufresniana*, Palm Cockatoo *Probosciger aterrimus*, Buffon's Macaw *Ara ambiguus*, Golden Conure *Guaruba guarouba* and many others.

The Walsrode Bird Park is also very successful in breeding Orange-breasted Fig Parrots *Cyclopsitta gulielmitertii*.

One place you should not miss when visiting the park is the walk-in greenhouse called the Jungle Trail, imitating a tropical rainforest. Inside, you can find one of the most fascinating birds in the world, the Guianan Cock of the Rock *Rupicola rupicola*, which only a few European zoos hold. There are also rare hornbills and many other birds flying free in the open space around the aviaries.

The event that attracts the attention of every visitor is the open-air bird show. Bird shows with parrots and/or birds of prey have become quite common in zoos, but what makes this show so special is that it includes many different bird species. It is truly an amazing experience to see the Secretary Bird *Sagittarius serpentarius* or pelicans interacting with the trainer. During the show the presenter provides information on the biology and conservation of every species, so it has an educational factor. Visitors who want to learn how different species are fed have a chance to see interactive feeding programs.

The Shoebill, from South Africa, is only kept in three European Zoos

THE SHOEBILL AND BEYOND

Another rarity at the Weltvogelpark Walsrode is a Shoebill *Balaeniceps rex*. This majestic creature is currently only kept in three European zoos. It comes from Africa and has an enormous bill reminiscent of a shoe. Being a solitary animal, it is difficult to set up a compatible pair and its breeding has been achieved only on a few occasions.

In total, there are over 4000 birds from 650 species kept in Weltvogelpark Walsrode. Naturally, I can't write about all of them, but I should definitely mention Birds of Paradise that are bred here on a regular basis. Another highlight is a nocturnal exhibit for the Northern Brown Kiwi *Apteryx mantelli*. This species is held in seven European zoos.

I recommend this park to all bird lovers, with May the best time to visit, when the beautiful gardens are in bloom and the breeding season is in full swing.

WILD CORNER

LITTLE TURBO, THE Spotless Crake

AUTHOR & PHOTO
DR CLAUDE LACASSE
DVM, MANZCVS (Australian Wildlife)

CRAKES are very shy and elusive birds that are rarely seen in the wild. When a crake was presented to the wildlife clinic, the entire staff was excited. The little bird had been attacked by butcherbirds and was a bit fluffed and dazed.

Weighing in at only 35g, this tiny bird was a challenge to anaesthetise but a thorough examination and radiographs under Isoflurane gas revealed no fractures, but a small puncture associated with some bruising under the left wing.

The crake received subcutaneous fluids on arrival, as well as anti-inflammatories (meloxicam) and antibiotics (amoxycillin/clavulanic acid) for the next 2 days.

On the third day, I decided to let the bird loose in a small room to assess if it was able to fly properly. *Little Turbo* took off immediately and flew very well, then landed on the floor. The bird was running around the room so fast none of us could catch it again! My nurse and I produced the same screech when we realised that *Little Turbo* could fit under the door as we both saw him disappear! The bird had vanished so quickly we didn't even know which direction he had taken! The next 20 minutes were extremely stressful as we went through the entire hospital searching for the small bird everywhere until the nurse finally found him in an office closet, behind some stationery items. Lesson learnt—never test-fly a crake in a non-secure room!

These little birds can be difficult to feed and are extremely stressed in care. Since the injuries were minor and healing well, and the bird seemed fit enough for release, it was decided that a quick release would be more beneficial than a prolonged hospital stay. *Little Turbo* was released the next day and exploded out of the cage like a rocket and disappeared into the tall grass.

THE ABUNDANCE OF

Oxley Common

AUTHOR
RON HUNT

Latham's Snipe
PHOTO GLENN ROMAN

Plum-headed Finch
PHOTO GLENN ROMAN

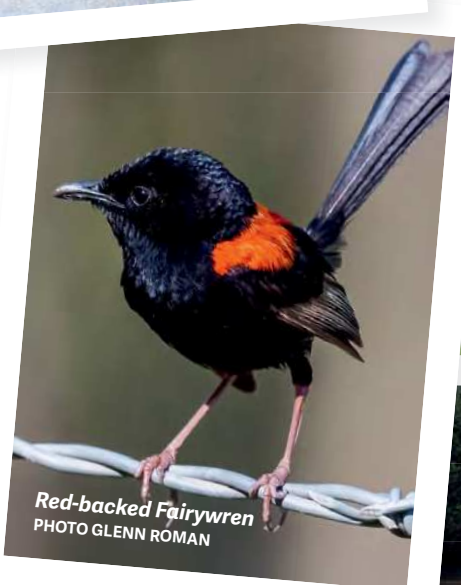
Oxley Common Environmental Centre
PHOTO GARY HUNT

OXLEY Creek is Brisbane's longest creek, some 70km long. It has its beginnings in the Scenic Rim region on the northern slopes of Mount Perry. The creek flows through 28 Brisbane suburbs before joining the Brisbane River at Tennyson. For many years it was used as a dumping ground for industrial waste, wrecked cars, and was generally known as a badly polluted area.

In 2006 Brisbane City Council established the Lord Mayor's Oxley Creek Rehabilitation Fund, and by 2012 the creek was awarded 1st place in its category of the Healthy Waterways Award. After 500 tons of waste was removed, the 120ha Oxley Common was formed and today is becoming world renowned as a bird watching site.

Sustainable Brisbane states: 'Despite the common's urban location just 7km from the Brisbane CBD, one-quarter of Australia's native bird species have been spotted onsite, along with migratory birds from as far away as Japan and Russia'. Species noted include the Magpie Goose, Black-necked Stork, Brown Goshawk and Latham's Snipe.

Variegated Wren
PHOTO RON HUNT



Red-backed Fairywren
PHOTO GLENN ROMAN

These telegraph poles with the weird wire 'sculpture' represent the 1974 flood level
PHOTO GLENN ROMAN

PHOTO GLENN ROMAN

Red-browed Finch
PHOTO RON HUNT

Superb Fairy-wren
PHOTO GLENN ROMAN

Pheasant Coucal
PHOTO GLENN ROMAN

Oxley was named after the explorer John Oxley, who first noted the area in his survey during 1823 but the First Nations People called it 'Benarrawa'. The area supplied them with food and water, the very reason why today the bird life is seen in abundance.

I was fortunate to see and photograph six different birds and sight another three in the space of 3½ hours when I visited. I am usually happy with capturing three different birds in the lens!

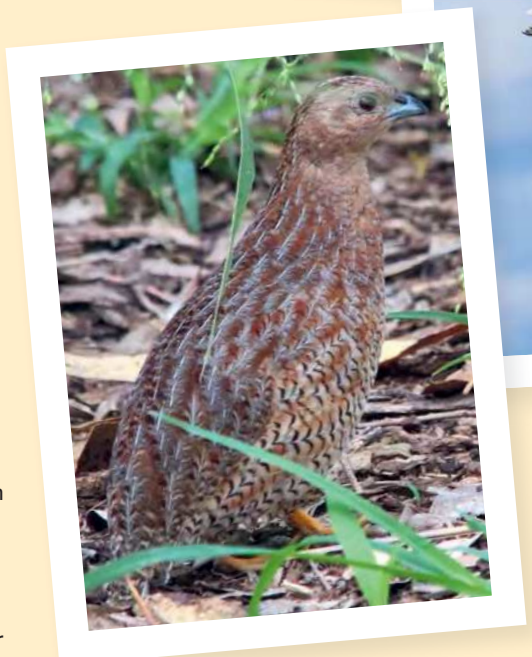
The common, accessed via Sherwood Rd, Rocklea, is very visitor-friendly, with plenty of parking and well-kept amenities block and picnic area. There is an easy walking track for bird watchers and photographers to wander along at a leisurely pace to observe nature.

The walk has a wide expanse of grassland. This grass at the track's start was shoulder-high, and the playground of *Cisticolas* and wrens. The track follows the creek, with tall trees, ferns and reeds along the secondary creeks that join the Oxley. Careful observation will reveal kingfishers, cuckoos and of course kookaburras in the trees. These can all be photographed from the main track. Brown Quail can be seen foraging among the ferns that grow alongside the track, and the smaller shrubs that spring up often house fairy-wrens, so keep the camera handy!

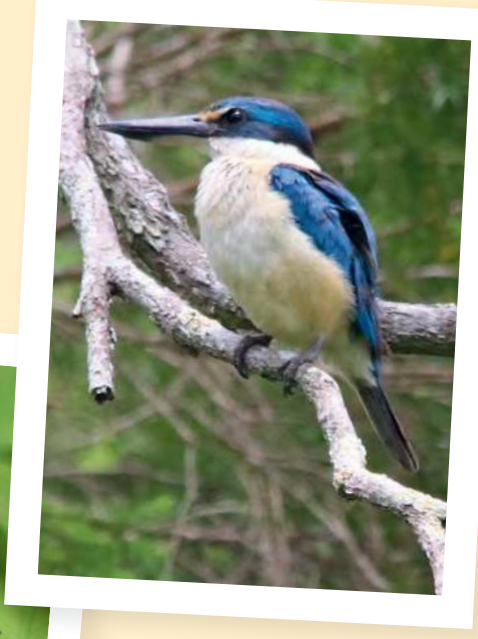
The grassland is extensive, and reveals finches such as Double-bars, Red-brows and Chestnut-breasts, which move between feeding on the grass seeds and drinking from the various water courses. I have been fortunate to visit many good birding sites throughout Australia but this place is second to none. I just hope it is never visited by irresponsible people who would trash it and destroy the birds' environment.

For a full history of this area, see **www.oxleycreekcatchment.org.au/history**.

Straw-necked Ibis
PHOTO GLENN ROMAN



Brown Quail
PHOTO RON HUNT



Sacred Kingfisher
PHOTO RON HUNT

Double-barred Finch
PHOTO GLENN ROMAN

Challenges of City Life

FOR BIRDS

Birds such as these Galahs are willing to explore and take a chance as they forage for morning breakfast

AUTHOR & PHOTOS
DR MILTON LEWIS
BSc (Hons) PhD

CONTINUING the theme of urban living from my last article, I thought we might venture into the findings of studies that investigate the fear of novelty (neophobia). The sprawl of our cities across the landscape, creating completely new environments, poses challenges for many species. Numbers of birds do quite well when faced with these challenges but other species silently disappear. I like to equate this to the situation we all face when introducing new birds to our aviaries, or if we build new aviaries, and excitedly watch the reactions of individuals in the unfamiliar environment.

Some birds will explore new sites, listen to new sounds and quickly find the food and water. Quieter birds might find a safe, secluded perch and watch the new world for a few hours before venturing into the insecurity of unknown territories. In the worst scenario, a species or individual might never feel comfortable, not settle, and it might be that you need to find them a new home or change something in the aviary.

NEOPHOBIA

It is natural for individuals to display some level of aversion to new situations or objects. Neophobia at varying levels is important in keeping us safe, because a certain level of care when exploring new situations can help avoid danger. New situations may contain new threats, such as predators that have not been encountered before or novel foods that could be toxic.

A good example of a species that is careful in new situations—where objects have been moved or new foods become available—is Black Rats. These successful mammals carefully explore new objects in their territories and are especially careful when trying new foods. Some individuals are almost impossible to catch, and any scent around the trap from a human will trigger very careful exploration. Although you know that they are in your shed, it can take over a week before baits are eaten, and some traps will never be successful. For this species, neophobia has been a highly successful evolutionary strategy.

EXPLORATORY BEHAVIOUR

There is a lot of variation between species in their level of exploratory behaviour and degree of apprehension in approaching novel objects. Australia has an exceptionally large number of cockatoo species, and some of these are quite bold in causing damage to crops (my vegetable gardens!) and even our houses, while other species dwell on the fringe of suburbia. You can observe this at a bird feeder or, in my case, at the pile of seed and debris I discard at the end of the backyard after cleaning cages. The first birds to take advantage are the Galahs, in the company of Crested Pigeons and Bar-shouldered Doves. After the seed has been there a few days, the Short-billed Corellas and Sulphur-crested Cockatoos join the feeding flock. These are all species that are very successful suburban dwellers and show high levels of exploratory behaviour.

Occasionally, I see Yellow-tailed Black Cockatoos alight in the small trees about 10m away from the other feeding birds. They sit and watch carefully, come down to investigate and often depart after only a few minutes. This species is a fringe dweller around our cities, occasionally coming in for the delicacy of a wattle grub but not really making the suburbs a home. There are other species that are similar, such as the bush Bronze-winged Pigeon that feeds on the seed patch intermittently.

RESEARCH ON NOVEL OBJECTS

In a recent paper (Jarjour *et al* 2020), a group of researchers decided to investigate the puzzle of variation in exploratory behaviour within a species when exposed to a novel object. In addition to the question of neophobia, researchers were also curious about the genetic influences on exploring and learned behaviours. They used a North American bird called the Black-capped Chickadee as the study species. It is found in both natural woodlands and suburbia. The researchers' first question was if rural Black-capped Chickadees were less likely to approach novel objects than their urban counterparts. This was followed by documenting if the more exploratory juveniles approached novel objects ahead of adults, and if dominant individuals were more or less likely to investigate new objects. They wanted to know if there was a 'pecking order' in how unusual encounters are dealt with in single groups of birds.

The researchers installed six feeding stations for the chickadees, three within an urban park several hundred metres from the centre of Ottawa, and three more in a rural woodland 25km away. The feeding stations were baited with sunflower seed and birds were tagged with microchips for electronic monitoring. These six feeders became known as 'familiar feeders' and functioned as the initial sites to attract the study birds into the foraging area. Data was recorded at these feeders to provide base line information before an additional two feeders were installed a few metres away to hold a novelty object and function as a further control.

These additional feeders then started to record for six consecutive days the exploratory behaviour of birds coming from the familiar feeder a few metres away. These novelties were trialed during different periods and included a novelty object placed at the feeder, a new food and a novel colour. The latter were objects covered in coloured paper in shades of blue.

The results of the experiments were quite clear. Urban birds, no matter what the novelty, were three times more likely to investigate a novel object than their rural counterparts. The question of dominance ranking did not appear to influence these results, with all urban birds being equally inquisitive.

Although the experiment does show a difference between urban and rural populations of birds in their approach to novel objects, it does not help us understand the pathway that led to these differences. One possible mechanism is that urban birds in the US are exposed to many different bird feeders in backyards, and the novelty objects used were perhaps less novel than the researchers believed. The urban birds in the experiment may already have been exposed to many novel objects and habituated.

There could also be a genetic difference between the populations where selection has favoured more inquisitive birds in urban areas. Their increased reproduction and survival (for example, because they might find more food) could have led to a divergence in the population away from birds that are more careful. Perhaps the only way to begin answering if there is a genetic component would be to captive-breed populations stocked from both urban and rural birds and then test their responses to novel objects.

THE YOUTH FACTOR

Within a species there can be a lot of variation in levels of avoiding novelty and, as mentioned, there could be a genetic component or it could be a learned behaviour. Younger individuals are often seen exploring more than their older counterparts. There are two possibilities to explain how this may have arisen. It could be that older birds have no need to explore because they have acquired over time the necessary knowledge for survival. Young individuals by necessity must spend more time learning to acquire survival skills and are therefore observed as more exploratory. Unfortunately, these young probably pay a high price, because it is in these learning months and years that their survival rates are lower.

I see the differences between the learned behaviour of older birds and the careful, sometimes frightened behaviours of fledglings in my canaries at the end of the breeding season. As the warmer weather of January approaches, I have generally separated all my breeding pairs and the fledglings. To help keep birds comfortable in the heat, I have found it is beneficial to feed them frozen cobs of corn. However, my own past experience has taught me that if I introduce corn on the cob to my young birds after they have left their parent, it is a major problem. The young see the new object in their cage and panic, flying about uncontrollably until I remove the corn. In this instance, the neophobia caused by the introduction of the corn cob overrides the exploratory behaviour that is normally observed in younger birds.

However, if I introduce them to the corn while they are still with the parents, it is not a problem. Because the older birds have already learned that it is not a danger, they start eating the corn provided, and their young copy them. The learned experience of the parents now becomes a learned experience for the young. Interestingly, I have also observed this if I use a differently coloured seed bowl to normal. However, if I offer a new seed type in a familiar bowl, there is no adverse reaction, and the younger birds try the new seed immediately.

NATURAL SELECTION

Birds in the wild, or indeed any animals, are faced with a multitude of challenges when their environments are altered by humans. The places where food and shelter were once found are destroyed or severely altered, particularly in instances of new housing developments. These places become extreme challenges. It probably takes 20 or more years before productive foraging sites develop in gardens with nectar and insects. Nesting sites might never appear for hollow-frequenting birds because these trees are dangerous during storms and we remove hollows as they develop. Our gardens do provide some thicker shrubs and small trees suitable for nesting by some of the honeyeaters or fairywrens but there are a large number of birds where the new suburban habitat is never viable.

I imagine there are options in reducing the impact of neophobia for birds in situations where the only option for survival is a suburb. I once spoke with a planner from one of the large housing developers and his explanation for the clear-felling of vegetation was that it was best to have a 'clear slate' when planning roads and removing natural drainages. He was not at all interested in leaving small tracts of natural vegetation for the wildlife because doing so would mean the loss of housing sites and that would cost the developer. A little more balance in the argument could be achieved if wildlife was held in greater value.

THE TAKE-HOME LESSON

We can definitely learn from this for our birds at home. Changing the colour of a food bowl in the aviary does not appear significant at first, but what if the associated stress resulted in a highly prized bird refusing to eat. I suspect that over the many generations of birds kept and bred in our aviaries there has been an unknowing selection of birds that are less prone to neophobia or fear of novel objects. The birds we keep are best considered domesticated, but perhaps we should also think when next selecting breeding stock about keeping individuals that adapt well to changes in housing. I already select for birds with appropriate temperament for breeding and showing but perhaps I could look further into the best behaviour for a captive bird in changing housing conditions.

REFERENCE

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Rescuing Alaskan Raptors to Fly Free

AUTHOR
VICKIE LILLO

Alaska RAPTOR CENTER

Bald Eagle named Sunset. Since 1782, Bald Eagles have been the US national symbol and for much longer a spiritual symbol to native Americans
PHOTO ALASKA RAPTOR CENTER

A Bald Eagle being treated for lead poisoning
PHOTO ALASKA RAPTOR CENTER

Bald Eagle main flight area
PHOTO GUSTAVO LILLO

'**READY** to fly'—three simple words but challenging for a rescued raptor at the Alaska Raptor Center. This is a premier rescue facility and sanctuary for wild birds, and the only full-service avian hospital in the 49th state. 'Ready to fly' for a bird of prey here means it has survived a stint in the ICU and spent the appropriate time in Convalescence.

'We are dedicated to providing humane treatment to all avian wildlife coming through our doors, and we do whatever we can medically to get them back to the wild,' executive director Jennifer Cross explained.

The center treats avian species from hummingbirds to Bald Eagles, the national bird of the United States, nicknamed by locals 'the Alaskan pigeon'. With over 5000 rescues to their credit and 2300 releases, this center treats on average 200 injured birds per year.

HISTORY

The center began in Sitka, south-east Alaska in 1980, in the backyard of concerned residents Jim Tigan and Don Muller. They were attempting to rehab a wounded Bald Eagle. With the help of volunteer foster raptor parents, by 1991 the center had relocated to its current 6.8ha (17 acre) campus 25 minutes from downtown Sitka. It is part of America's largest national forest, the 688 000ha (17 million acre or 500 mile) Tongass National Park—known simply as The Tongass—premium temperate rainforest stretching from central California to south-east Alaska.

Championed in 1917 by then-President Teddy Roosevelt, an avid conservationist, Tongass's designation as a national forest made it off-limits to the scourges of commercial exploitation. The raptor center's 50 000 annual guests can stroll a 400m nature trail loop through the Tongass bordering the Indian River, a prime salmon run habitat, which eventually enters a peat-forming ecosystem of spongy muskeg (bog) meadow.

INTAKE PLAN OF ACTION

Receptionist Lolly Dahl handles the rescue line phones—a downed eagle flailing in the harbour...another foraging amongst garbage. More than likely both are starving. 'He's small and even though his wings are not injured, he's not getting any lift. Probably because his muscle tone is gone,' avian care specialist Sheila Swanberg said.

First, the team will inspect the keel, the extension of the breastbone which anchors the wing muscles and provides leverage for flight. Staff members gauge the level of emaciation based on the amount of 'meat' on either side of that keel bone.

From this point, the raptor center has a set plan of action. Back at the clinic, they will take the bird's vitals. If the temperature's too low, food is not an option, so they introduce fluids subcutaneously between the skin layers. They will draw blood, checking for infection, and take X-rays for broken bones. Often a raptor is too injured to care about its personal hygiene, which Sheila explained is when the feather lice population starts expanding. 'The feathers get damaged as the lice consume them, and then the raptor's ability to fly deteriorates,' she said. Although feather lice can't survive on humans, they will still bite, causing irritation and rashes. 'We named this Bald Eagle *Raid*, like the bug spray," laughs Sheila, 'because that's what we feel like we need with a bird like this.'

Of the raptor injuries encountered, 85% can be blamed on mankind—from birds flying into manmade objects, ingesting poisons, being hit by cars, or maliciousness. Starvation and hypothermia are also concerns. Lead poisoning afflicts many Bald Eagles. They contract it when they scavenge tainted 'gut piles' or leftover carcasses. Treatment is both intense and invasive. 'When we go out to get a bird, we really want it to fight us—if the bird's lying on the ground, not reacting to our presence, we get a bad feeling,' Sheila said.

Upon reaching the Alaska Raptor Center, afflicted birds are immediately transferred to the ICU, where individual blanketed enclosures await. The idea is to keep the injured bird of prey as contained as possible, and limit stressful human interaction. 'The less space, the better,' another avian care specialist, Hannah Blanke explained. 'Just in case they do have some kind of broken bone, we don't want them thrashing around.'

Some birds require just an overnight stay, others remain in ICU for a week, depending on the severity of their trauma. Once they get to the point where they're eating food with skin and bone, and passing that, they are moved to Convalescence.

Weathering yard housing a Snowy Owl
PHOTO GUSTAVO LILLO

REHABILITATION

Stage two in the rerelease process, the Convalescence area permits 'easy access' to birds needing treatments or bandages changed. The low-ceilinged rooms enable recovering raptors to practice the first stages of flight—one flap and some gliding—without re-injuring themselves. This helps in the transition to the Main Flight area where they will be with other eagles. 'If our patient isn't quite ready to handle having all those other eagles around, we'll keep them in here till they seem ready to return to the wild,' Hannah said. 'Maybe they just need to put a little more meat on their bones.'

Finally, full rehabilitation takes place at the Suzanne and Walter Scott Foundation Bald Eagle Flight Training facility. With multiple perching options, this 566m3 (20 000cu ft) state-of-the-art 'aerobic hallway' is a high-ceilinged room where raptors regain their wing fitness, manoeuvrability and lift. L-shaped by design, the main flight assists these birds of prey in practicing their turns. Being able to eat while airborne is a prerequisite the raptors will have to master before certification as 'fit to fly'.

A specially constructed viewing corridor with one-way glass permits visitors and rehabilitators alike to observe the eagles reclaiming their flight skills without disturbing them. The rooftops have open slots to acclimatise the raptors to the natural environment. Once their 'physical therapy' is completed, and the staff sees 'beautiful flight', these predators can be returned to the wild.

RELEASE

Jen Cross masterminds release day, an annual spring event at the muskeg property. It's timed for optimum survival for the raptors, when there's herring and hopefully some salmon starting to run. 'It's a nice wide-open space for them to get the lift that they need—up over the trees and off towards the ocean or the mountains—wherever they want to go, because they're free,' Jen said. On the day we are there, a local business owner/major supporter from the audience takes momentary possession of the bird, which is mantled with a falconry hood. On the count of three, an Alaska Raptor Center staffer removes the bird's cap. Then it is released to fly off at its own pace.

RAPTORS-IN-RESIDENCE

Birds unable to be effectively rehabbed become 'Raptors-in-Residence', living out their lives as ambassadors for the center's education and outreach programs. Currently, all 24 of the 'locals'—Bald *Haliaeetus leucocephalus* and Golden Eagles *Aquila chrysaetos*, Red-tailed *Buteo jamaicensis* and Swainson's Hawks *Buteo swainsoni*, Peregrine Falcons *Falco peregrinis*, Great-horned *Bubo virginianus*, Great-grey *Strix nebulosa*, and Northern Saw-whet Owls *Aegolius acadicus*—rotate between their individual enclosures, or mews, and the Weathering Yard. In this outdoor aviary, they are exposed to the elements of nature—sunlight, rain, snow... all the atmospheric conditions essential to maintaining a sound body and mind.

FOR THOSE WHO STAY

Enrichment items help. 'For a bird that's never leaving here, we need to give them something to do to keep them mentally stimulated,' Sheila said. 'We don't want our raptors getting bored. We also don't want their muscles atrophying from just sitting around all day.' As an avian care specialist, Sheila's job includes preparing the birds' specialised diets and cleaning their mews. In general, she says, 'getting to hang out with them'. She takes pride in the center's undoubted achievements. 'We're doing a lot of good...educating the public...healing birds to the best of our ability. Honestly, that's an amazing feeling.'

Tito, a Northern Saw-whet Owl (missing an eye) is one of the smallest owls in North America
PHOTO ALASKA RAPTOR CENTER

Boris, a Great Gray Owl—the world's largest species of owl by length
PHOTO GUSTAVO LILLO

Qigiq, a Snowy Owl and Raptor-in-Residence, belongs to the heaviest owl species in North America
PHOTO ALASKA RAPTOR CENTER

AVIAN FLU CONCERNS

As a bird migration hub, avian flu is a big concern in Alaska. Millions of birds from around the world—Asia, North and South America, Australia, and even Antarctica—converge in 'the last frontier' to breed in the near-continuous daylight. Viruses can exchange their genetic material and get rearranged as mutations. US Geological Survey wildlife geneticist Andy Ramey said that's a concern. 'In Fall, as birds disperse, they can bring viruses with them, leading to outbreaks in new regions,' he said.

Raptors are potentially the most vulnerable because they feed on infected birds, dead or alive. 'With the warm, dry weather and lots of UV rays, hopefully it (the avian flu) has abated,' Jen said. But still, those contaminated few—mostly Canadian Geese *Branta canadensis* and Bald Eagles—could be enough to wipe out all of the center's birds. For that reason, the smaller raptors and a few eagles are being housed indoors in fully covered enclosures, while the outdoor owls and Bald Eagle trio out front are protected by tarps and/or plastic sheeting.

One of 530 Bald Eagles released over 42 years
PHOTO ALASKA RAPTOR CENTER

WHY THE

National Finch & Softbill

CENSUS COUNTS

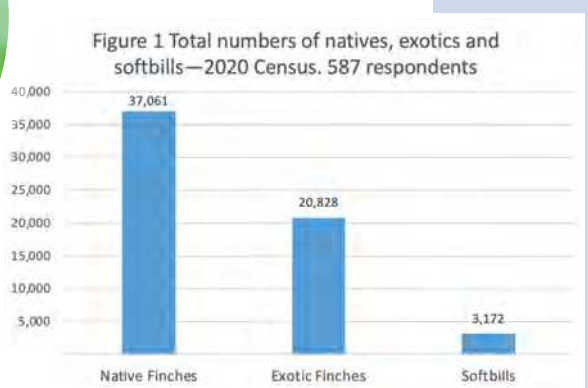
The Red-backed Rufous-backed Mannikin needs a breeding focus

The Red-headed (Aberdeen) Finch status has improved and is no longer on the rare list

The Orange-cheeked Waxbill needs breeder collaboration

AUTHOR
GARY FITT

PHOTOS
PETER ODEKERKEN



LOOKING AHEAD FROM WHERE IT ALL BEGAN

We know that many finch and softbill species are quite common and have sustainable populations. However, a growing number of species are uncommon and reliant on just a handful of breeders. They are clearly vulnerable and need focussed conservation breeding efforts to ensure the continuation of viable populations. To make any difference we need data, and we need to understand how numbers are changing.

That was the thinking behind the National Finch and Softbill Association (NFSA) initiating the First National Census in 2008 and continues to be as we present analysis of the most recent 5th National Census of 2020, and look to the 2022 Census beginning later this year.

In 2008 we really had little understanding of the population sizes of native or exotic finches and softbills in Australian aviaries. What we did know is that some species commanded very high prices—probably the best measure of lack of abundance. If we were to make plans to try to preserve rare species, it was important to prioritise and to have a baseline understanding of what we had left.

The main aims of the census were to:

- Provide guiding data on captive populations of finches and softbills in Australian aviaries,
- Establish trends in populations over time, *and*
- Identify species that would benefit from co-ordinated breeding programs.

Further censuses were conducted in 2010, 2014, 2017 and 2020—from 2010 including native as well as exotic finches and softbills.

RESPONSES

The census period ran from September 2019—March 2020.
The census is totally anonymous, but having data from individual bird breeders, rather than pooled returns, allows us to gain a lot of information.

We received returns from 587 finch and softbill enthusiasts. This was an improvement on previous censuses, but still only a fraction of the many people who apparently keep and breed finches and softbills. It is striking that finch-oriented Facebook pages attract thousands of members, but very few of these people seem to truly participate in activities linked to the hobby. Nonetheless, it is heartening to see an upward trend in both the number of respondents and total number of birds captured by the census over the years.

Results

Overall, the 587 respondents held 37,061 native finches, 20,828 exotic finches and 3172 softbills of many types—a total of 61 061 birds. These numbers covered 59 different exotic species, 33 species, subspecies and mutation categories of native finches, and an amazing 63-plus softbill species—a further increase and a clear sign of increasing popularity.

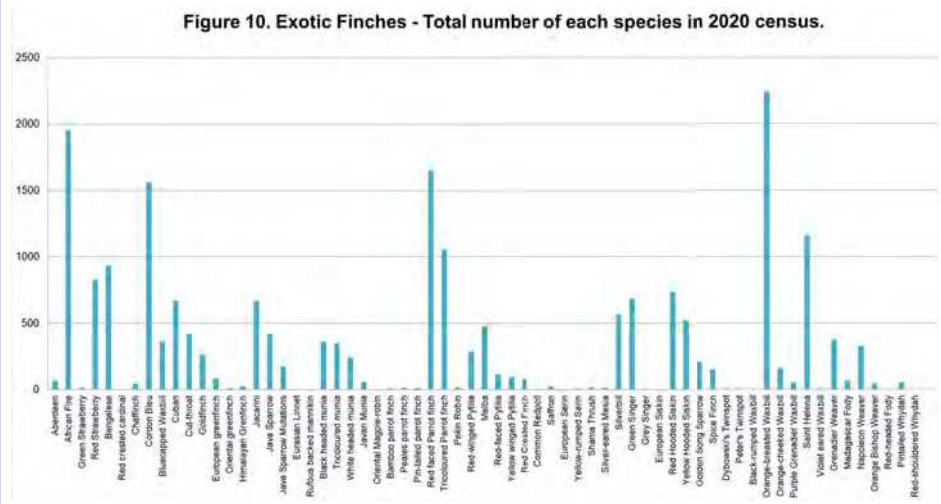
Respondents came from all over Australia but were down a little in New South Wales, Queensland and Western Australia, with numbers similar for South Australia, and up for Victoria compared to the 2017 Census. It is positive that only 2.9% of respondents did not reveal their state, compared to 9% in the 2014 Census.

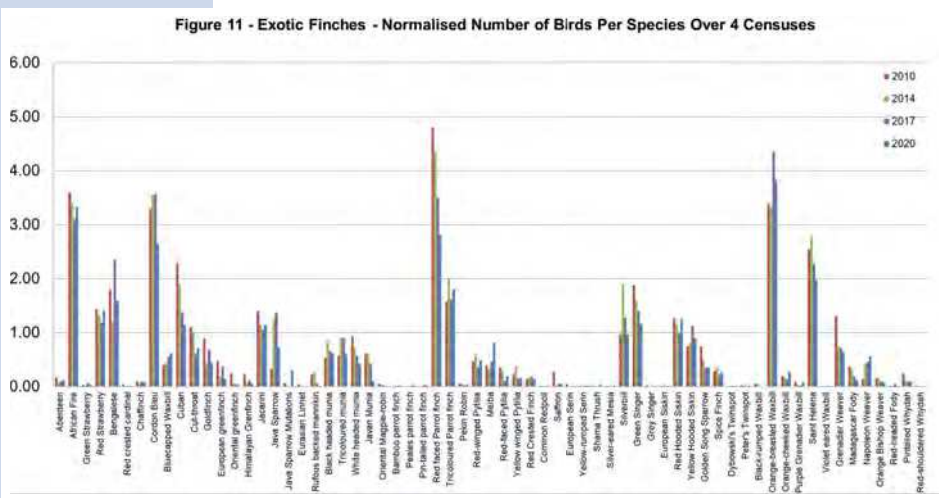
Table 1 summarises the main features. It is interesting to note that for exotic finches, the numbers kept by the average respondent in the 2008 Census—(~76 birds /respondent) was much higher than in the 2010 (43 birds/respondent), 2014 (42 birds/respondent), 2017 (42 birds/respondent) and in 2020 (35 birds/respondent).

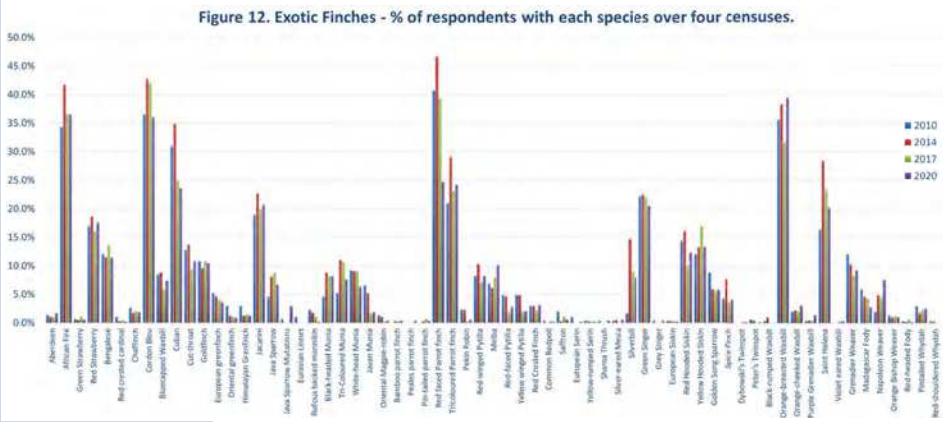
Table 1. Major Features of the NFSA Censuses to 2020

CENSUS YEAR	NUMBER OF RESPONDENTS	EXOTIC FINCHES		AUSTRALIAN FINCHES		SOFTBILLS	
		TOTAL	NUMBER OF SPECIES	TOTAL	NUMBER OF SPECIES*	TOTAL	NUMBER OF SPECIES
2008	209	15,880	57	-	-	-	
2010	307	13,364	61	22,953	34	498	47
2014	410	17,262	58	23,754	34	603	47
2017	491	19,331	58	29,968	34	2254	52
2020	587	20,828	59	37061	33	3172	63+

** Includes subspecies and mutations*







INTERPRETING THE NUMBERS OVER TIME

Table 1 suggests that most of the larger bird breeders have participated in the census from the first and, over time, we are adding larger numbers of smaller breeders. From 2010 to 2020, the number of respondents increased by 48% but total numbers of native birds increased by only 38% and total exotics by 36%, consistent with more smaller breeders participating in the census—which is great. All data is valuable.

EXOTIC FINCH SPECIES

Figure 10 shows the total numbers for each exotic species in the 2020 Census. ***Figure 11*** shows the normalised numbers for each exotic species over the five censuses from 2008 to 2020, while ***Figure 12*** shows the percentage of respondents who held each species over this same period.

Of the 61 exotic species in the 2020 Census, no one recorded holding any Red-shouldered Whydah or Black-rumped Waxbill. Several species which recorded as zero in both 2014 and 2017 were recorded in 2020, albeit in small numbers. Among those recorded with very low numbers are the European Serin, Peale's Parrot Finch, Shama Thrush, Grey Singer, Peter's Twinspot and Silver-eared Mesia (***Table 2***))—clearly vulnerable.

Surprisingly, the Dybowski's Twinspot, Bamboo Parrot Finch, Pin-tailed Parrot Finch and Violet-eared Waxbill were absent from earlier censuses, but all four species were recorded in 2020, albeit in very small numbers. Let's hope that the few breeders with them can keep them going.

Common Species

Common species (17) were characterised with more than about 400 birds.

The Orange-breasted Waxbill, Cordon Bleu, African Firefinch, Red-faced Parrot Finch, St Helena's and Tri-coloured Parrot Finches were the most commonly kept species. Next were the Bengalese, the Red Strawberry Finch and Red Siskin—it is great to see both the Red-hooded Siskin and the Yellow-hooded Siskin in the common list.

There have been a few changes in ranking among the common species. Red Siskins moved from 15th to 9th, and Melbas moved from 24th to 16th. Some species have dropped but the overall pattern of relative abundance is quite stable among the top 40 species. Some species—Cordon Bleus, Yellow-hooded Siskins and Napoleon Weavers—show a consistent increase in popularity, with more respondents holding them.

Table 2. Common and Rare Exotic Finches Recorded in the 2020 Census

COMMON			RARE		
SPECIES	TOTAL NUMBER	RESPONDENTS (% OF RESPONDENTS)	SPECIES	TOTAL NUMBER	RESPONDENTS
ORANGE-BREASTED WAXBILL	2245	231 (49.9%)	JAVAN MUNIA	60	11
AFRICAN FIREFINCH	1953	214 (46.2%)	PURPLE GRENADIER WAXBILL	50	8
RED-FACED PARROT FINCH	1651	211 (45.6%)	ORANGE BISHOP WEAVER	46	6
CORDON BLEU	1558	118 (25.5%)	CHAFFINCH	45	11
SAINT HELENA WAXBILL	1162	142 (30.7%)	SAFFRON		
FINCH	27	3			
TRICOLOURED PARROT FINCH	1057	145 (31.3%)	HIMALAYAN GREENFINCH	26	7
BENGALESE	933	67 (14.5%)	GREEN STRAWBERRY	15	3
RED STRAWBERRY	830	103 (22.3%)	PEALE'S PARROT FINCH	15	2
RED-HOODED SISKIN	735	72 (15.0%)	ORIENTAL GREENFINCH	13	5
GREEN SINGER	687	120 (25.9%)	PIN-TAILED PARROTFINCH	12	2
CUBAN	671	138 (29.8%)	BAMBOO PARROT FINCH	10	2
JACARINI	668	121 (26.1%)	YELLOW-RUMPED SERIN	8	1
AFRICAN SILVERBILL	566	46 (9.9%)	GREY SINGER	7	2
YELLOW-HOODED SISKIN	552	83 (16.9%)	DYBOWSKI'S TWINSPOT	7	1
JAVA SPARROW (NORMAL)	516	78 (16.8%)	PETER'S TWINSPOT	6	1
MELBA	478	59 (12.7%)	VIOLET-EARED WAXBILL	5	2
CUTTHROAT	420	63 (13.6%)	COMMON REDPOLL	4	1
			RED CRESTED CARDINAL	2	1
			RUFOUS-BACKED MANNIKIN	2	1
			EUROPEAN SISKIN	2	1
			RED-HEADED FODY	2	1

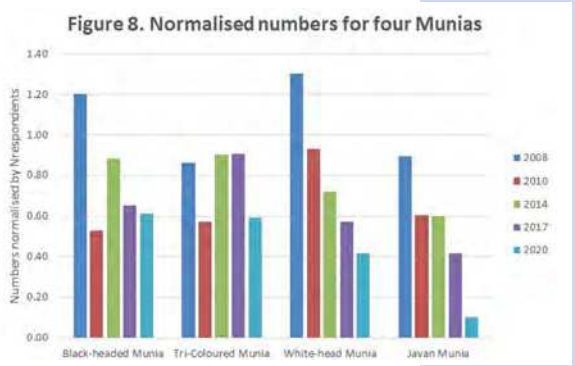
African Silverbills remain on the common list but are now ranked as the 13th most abundant foreign finch—a good example of how effective efforts to recover an aviary species can be.

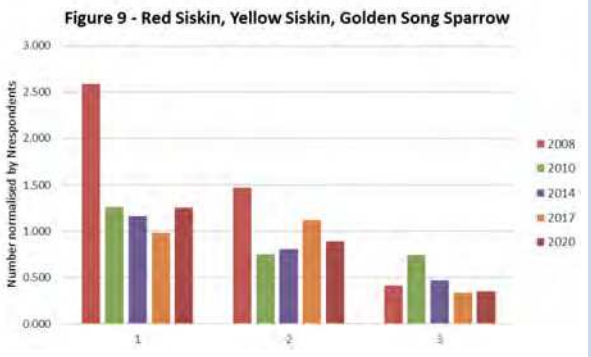
The Yellow-winged *Pytilia* appears to have gone backwards severely, with lower numbers and less than half the number of people keeping them. This species could well fall into the rare category without some concerted effort by breeders. By contrast, the Napoleon Weaver (Yellow Bishop) continues an upward trend in number from 41 birds in 2008 to 222 birds in 2017, and 324 birds in 2020, with progressively more people keeping them.

Rare Species

Rare species were defined as those held in very low numbers (~50 or less) and kept by five or fewer people. There were 17 such species in 2020—all of which would seem to be threatened. Numbers appear stable but low for species like Red-crested Finches and Himalayan Greenfinches, while Oriental Greenfinches have declined and are clearly in the rare category.

Numbers of the Red-headed Finch (Aberdeen) are increasing slowly and it is no longer on the rare list, while Saffron Finches remain very





vulnerable. Likewise, the Oriental Greenfinch and the Rufous-backed Mannikin are in real trouble. The latter was once very common and should be reasonably simple to bring back to good numbers if those holding them are prepared to co-ordinate with one another and others. QFS has tried for some time to get a conservation breeding program going on Rufous-backs but no one seems to have young birds they are prepared to sell. We would be happy to hear from anyone interested in taking action to save this striking species.

Obviously the remaining 30 or so exotic species lie between these groups of common and rare species in terms of abundance. Many of these, such as Golden Song Sparrows, are nonetheless vulnerable.

Munias & Siskins

Among the three commonly kept munias—the Tri-coloured, Black-headed and White-headed—the first two are quite stable, but the White-headed continues to decline and the Javan has crashed in numbers (***Figure 8***). The White-headed Munia really needs some focus, particularly because it is a species which is easily bred and yet numbers have fallen so dramatically. Javan Munias suffered from some unfortunate hybridisation activities in the past which mean there are now very few pure birds remaining. Again, action is required to save this species in Australian avicultureure.

Red-hooded Siskins are present in good, steady numbers (***Figure 9***). Several breeders of Red Siskins seem to breed 40–50 young per season. However, this does not seem to be reflected in the census, which begs the question 'where do all these birds go?' We seem to have experienced a major sink in numbers for many species, with just a few people successfully breeding and supplying into a market where they simply don't survive and prosper. These species all need ongoing focus.

NATIVE FINCH SPECIES

The 2020 census again recorded numbers for all native finch species and subspecies, including Beautiful and Red-eared Firetails and White-bellied Crimson Finches. Although there is huge variation in the number of each species kept, this more reflects the current cost and perceived difficulty in keeping some species. While it is reasonable to say that no Australian finch species is truly threatened in aviculture, it would nonetheless be great to see increasing numbers of firetails, White-bellied Crimsons and Lesser Red-browed Finches.

Gouldian Finches were by far the most popularly kept species, making up 29.5% of the 8827 birds recorded. Of these, 74% of respondents kept 7843 Normals and 3641 mutations. Zebra Finches were the second most abundantly held native. The ranking of species

in order of popularity was Painted Firetails, Stars, Diamond Firetails, Plumheads, Blue-faced Parrot Finch, Parson's and Pictorellas.

One species which dropped noticeably from 9th to 15th in numbers was the Yellow-billed Longtail. Why would that be? They are a great species.

Approximately 96% of all respondents had some native finches. Apart from the Red-eared Firetail and Beautiful Firetail, both of which require specialised conditions and handling, all the native species were recorded in reasonable numbers, although none came close to the Gouldian (***Figure 13***).

Mutations were recorded in nine native finch species:

- Black-throated (Fawn, Cream, White)
- Double-barred (Fawn),
- Diamond Firetail (Fawn, Pied, Yellow),
- Painted Firetail (Yellow, Fawn),
- Long-tailed (Fawn, Cream, White),
- Gouldian (many),
- Blue-faced Parrot Finch (Lutino),
- Star Finch (Yellow, Fawn, Cinnamon, Pied)
- Zebra Finch (many).

Some results were surprising. For example, about the same percentage of respondents have Crimson Finches, Parson's and Longtails (about 13% each), and the numbers are similar for each (400–800 birds), but Crimsons continue to be 'valued' at $200–$250 a pair, whereas Parson's and Longtails sell for $60–$80. Clearly value is not related solely to abundance.

Figure 13 Australian Finches - Total number per species 2020 Census

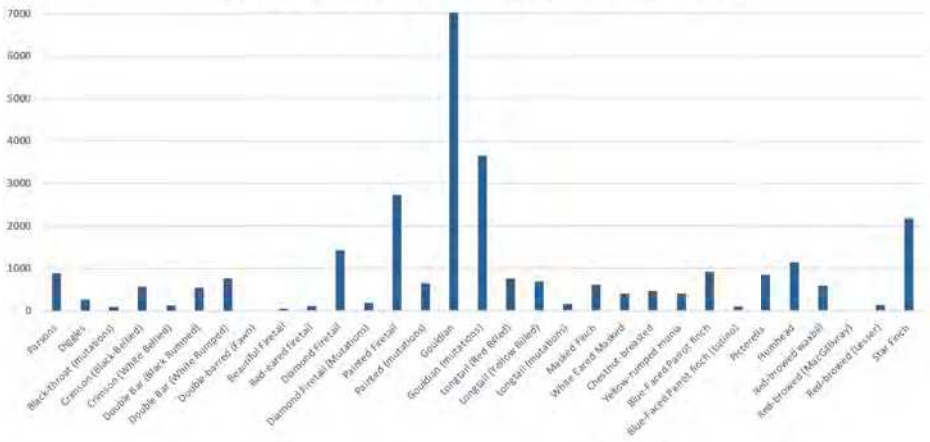
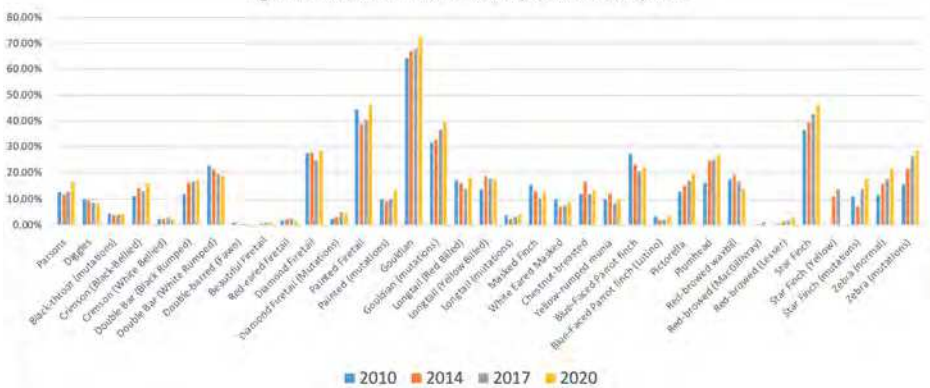


Figure 15. Australian Finches - % Keepers with each species



SOFTBILLS

A total of 3172 softbills were recorded across at least 63 species. These were held by 173 respondents, well up from 78 respondents in the last census. This means that almost 30% had softbills of some type. Surprisingly, 10 of these 173 people held only softbills, while the other 163 also had finches, with an average of 18% of their collection made up of softbills. This level is impressive, particularly when we note that the 2020 Census occurred before Queensland regulations were modified to allow well over 100 softbill species to be kept in that State, up from just 12 species.

It is immediately obvious that the highest category, with 897 records, was 'Other Softbills, Pigeons & Quail' which means that for future censuses we may need to provide further categories to record more complete data.

Comments provided by respondents showed that many of these 'Others' were doves—Diamond, Peaceful, Talpacoti, Masked etc; quail—Brown, King, Jap, Stubble etc—but there were also some significant softbill species that we need to add to the census. These included Rainbow Bee-eaters, catbirds, kookaburras, whipbirds, Red-Whiskered Bul Buls, White-headed Pigeons, Squatter Pigeons, New Guinea Ground Doves, Crested Pigeons and many species of owl.

Softbills included six species of wrens (8% of total), various fruit pigeons and seed-eating doves (38% of total), six honeyeaters (7% of total), Crimson, White-fronted and Orange Chats (7% of total). The diversity of species is extraordinary, but it is noticeable that only a handful of enthusiasts hold most of them. It is also likely that many softbill keepers did not engage with this census given its focus on finches.

For the 2020 Census we included species like Pekin Robins, Silver-eared Mesias and Shama Thrush in the softbill list, rather than in the finch list as they were previously. For those three species the 2020 Census was not good news. Pekin Robins appear to be in real trouble, held by very few people. Once relatively common, they have crashed in the last 20 years. I recall in the late 1990s contemplating a pair for $400—certainly not possible to buy them for that these days, and we may lose this species.

Overall, softbill keeping is on the increase and a growing number of finch aviculturists are dabbling in them.

WHAT DOES THIS MEAN & WHAT CAN WE DO?

In the summary of the 2014 NFSA Census, we noted that many exotic finches were rare and declining in our aviaries, while a suite of species were quite abundant, popular and with strong breeding populations. The 2020 Census shows much the same pattern but, sadly, there are more species which have either disappeared or declined in number.

With genetically depleted populations held by just a handful of people, we need some concerted and co-ordinated action to save them. Apart from the African Silverbill, I have not seen any documentation of how programs established by clubs have performed. Hopefully they can help. We would love to hear of program efforts and success stories or otherwise.

Past efforts to establish co-operative breeding groups have often been spectacular failures, particularly with rare and highly priced species. A tragic example here is the Silver-eared Mesia—a softbill which required specialised housing, diet and management and got to the point where few could afford them. Unfortunately, an inexperienced 'stamp collector' bought all the remaining birds and lost the lot. The species is now gone from Australian aviculture.

A contra example is the Napoleon Weaver, which once commanded high prices and is now more common at reasonable prices. It would be great to see this to happen with species like the Orange-cheeked Waxbill. Some rare species are unlikely to ever be very common because they require such specialised housing or care. Red-crested Finches, Purple Grenadier Waxbills, Pin-tailed Whydahs are such species.

We should celebrate the fact that Australian breeders have maintained very healthy and strong stocks of many exotic finches, despite the long-standing ban on legal imports. Cordon Bleus, African Firefinches, Orange-breasts, Saint Helena's, Green Singers, Cubans, Jacarinis, Red-faced Parrot Finches, Tri-coloured Parrot Finches—the 'bread and butter' birds for many breeders—are all in good numbers and with genetically viable populations. Likewise, Red Siskins and Yellow Siskins are stable.

By contrast, some other groups are teetering. The *Pytilia* group (Red-winged, Yellow-winged, Red-faced and Melba Finches) are in this category and would benefit from more concerted focus by more

breeders. The Aberdeen, Rufous-backed Mannikin, Green Strawberry are simply a tragedy—having once been very common they are now close to gone.

If I was to propose species for concerted co-operative breeder programs, they would be the Aberdeen, Rufous-backed Mannikins, Orange-cheeked Waxbills and Himalayan Greenfinches.

Among Australian finch species, none seem highly threatened, although clearly some are rare and require specialised avicultural techniques. Red-eared Firetails and Beautiful Firetails are examples. We need to maintain focus on all the subspecies and keep an eye on mutations—it is imperative not to lose pure breeding lines of the Normal birds.

Regarding softbills, this latest census certainly indicates growing numbers of keepers, species and birds. There is a burgeoning interest that is quite compatible with finch aviculture, and we can only hope that a significant number of softbills will achieve viable and stable populations.

FUTURE CENSUS

The NFSA will commence the next census later this year, with early results to be presented around July 2023. Hopefully even more finch and softbill aviculturists will feel comfortable to contribute to what should be a national initiative that benefits all committed aviculturists. The more information available, the better we can plan a response to the pending loss of current species.

ACKNOWLEDGMENTS

We are grateful to all member clubs of the National Finch and Softbill Association for supporting the census and particularly to the 587 anonymous but committed finch and softbill breeders who responded. We are also grateful to Lindsay Nutley who helped with the set-up and operation of the Survey Monkey system which greatly assisted with data collection.

Appendix 1. Full RESULTS for the 2020 NFSA National Finch Census – Exotic and Foreign Finches

EXOTIC FINCHES			NATIVE FINCHES		
SPECIES	TOTAL	NUMBER OF RESPONDENTS	SPECIES	TOTAL	NUMBER OF RESPONDENTS
ORANGE-BREASTED WAXBILL	2245	231	GOULDIAN	7843	401
AFRICAN FIRE	1953	214	ZEBRA (MUTATIONS)	5580	158
CORDON BLEU	1558		GOULDIAN (MUTATIONS)	3641	218
SAINT HELENA	1162	118	PAINTED FIRETAIL	2724	256
TRICOLOURED PARROT FINCH	1057	142	STAR FINCH	2170	255
RED FACED PARROT FINCH	1040	145	DIAMOND FIRETAIL	1418	158
BENGALESE (ALL VARIETIES)	933	67	ZEBRA (NORMAL)	1367	121
RED STRAWBERRY	830	103	PLUMHEAD	1139	148
RED HOODED SISKIN	735	72	BLUE-FACED PARROT FINCH	921	123
GREEN SINGER	687	120	BLACKTHROAT, PARSON	892	92
CUBAN	671	138	PICTORELLA	840	110
JACARINI	668	121	DOUBLE BAR (WHITE RUMPED)	769	103
RED FACED PARROT FINCH (MUTATIONS)	611	78	STAR FINCH (MUTATIONS)	769	99
AFRICAN SILVERBILL	566	46	LONGTAIL (RED BILLED)	765	101
YELLOW HOODED SISKIN	523	78	LONGTAIL (YELLOW BILLED)	690	95
MELBA	478	59	PAINTED FIRETAIL (MUTATIONS)	643	76
JAVA SPARROW (NORMAL)	421	39	DOUBLE BAR BLACK RUMPED	631	107
CUT-THROAT	420	63	MASKED FINCH	617	71
GRENADIER WEAVER	377	54	RED BROWED	585	78
BLUECAPPED WAXBILL	363	43	CRIMSON (BLACK BELLIED)	570	88
BLACK HEADED MUNIA	361	48	CHESTNUT BREASTED MUNIA	467	75
TRI-COLOURED MUNIA	349	44	YELLOWRUMPED MUNIA	405	55
NAPOLEON WEAVER	329	44	MASKED (WHITE-EARED)	397	49
AURORA	286	48	BLACKTHROAT (BLACK RUMPED)	268	47
GOLDFINCH	262	61	DIAMOND FIRETAIL (MUTATIONS)	176	26
WHITE HEADED MUNIA	245	37	LONGTAIL (MUTATIONS)	160	24
GOLDEN SONG SPARROW	208	34	CRIMSON (WHITE BELLIED)	133	13
JAVA SPARROW (MUTATIONS)	175	17	LESSER REDBROWED	127	16
ORANGE CHEEKED WAXBILL	160	18	RED-EARED FIRETAIL	109	9
SPICE FINCH	153	24	BF PARROT FINCH (MUTATIONS)	97	19
RED FACED PYTILIA	112	16	BLACKTHROAT (MUTATIONS)	94	24
YELLOW WINGED PYTILIA	96	12	BEAUTIFUL FIRETAIL	45	7
RED CRESTED FINCH	85	11	DOUBLE-BARRED (MUTATIONS)	9	3
EUROPEAN GREENFINCH	83	21			
RED CRESTED FINCH	80	18			
ABERDEEN	68	10			
MADAGASCAR WEAVER	65	16			
JAVAN MUNIA	60	11			
PINTAILED WHYDAH	54	15			
PURPLE GRENADIER WAXBILL	50	8			
ORANGE BISHOP WEAVER	46	6			
CHAFFINCH	45	11			
SAFFRON	27	3			
HIMALAYAN GREENFINCH	26	7			
GREEN STRAWBERRY	15	3			
PEALE'S PARROT FINCH	15	2			
ORIENTAL GREENFINCH	13	5			
PINTAILED PARROTFINCH	12	2			
BAMBOO PARROT FINCH	10	2			
YELLOW RUMPED SERIN	8	1			
GREY SINGER	7	2			
DYBOWSKI'S TWINSPOT	7	1			
PETER'S TWINSPOT	6	1			
VIOLET EARED WAXBILL	5	2			
COMMON REDPOLL	4	1			
RED CRESTED CARDINAL	2	1			
RUFOUS BACKED MANNIKIN	2	1			
EUROPEAN SISKIN	1	1			
RED HEADED FODY	2	1			
BLACK RUMPED WAXBILL	0	0			
RED SHOULDERED WHYDAH	0	0			
TOTAL	20828		TOTAL	37061	

Appendix 2. Full RESULTS for the 2020 NFSA National Finch Census – Softbills

SOFTBILLS			SOFTBILLS		
SPECIES	TOTAL	NUMBER OF RESPONDENTS	SPECIES	TOTAL	NUMBER OF RESPONDENTS
OTHER SOFTBILLS, PIGEONS, QUAIL	857	83	YELLOW THROATED SCRUBWREN	28	6
PAINTED BUTTON QUAIL	208	26	WHITE BROWED WOODSWALLOW	28	9
SILVEREYES	183	26	REGENT BOWERBIRD	27	7
WHITE BELLIED SPINIFEX PIGEON	126	21	PURPLE CROWNED FAIRY WREN	26	4
SUPERB FAIRY WREN	123	24	BRUSH BRONZEWING	25	6
GREEN WINGED PIGEON	119	25	BLACK BREASTED BUTTON QUAIL	23	7
CRIMSON CHAT	107	17	RED BELLIED SPINIFEX PIGEON	23	7
BLEEDING HEART PIGEON	92	19	VARIEGATED FAIRY WREN	22	8
ROSE CROWNED FRUIT PIGEON	76	12	WOMPOO PIGEON	20	4
PURPLE CROWNED FRUIT PIGEON	64	12	RED-CAPPED ROBIN	20	7
INLAND DOTTEREL	58	16	FLOCK PIGEON	19	6
WHITE CHEEKED HONEYEATER	52	7	EASTERN SPINEBILL	19	7
SATIN BOWERBIRD	50	13	PEKIN ROBIN	18	3
SCARLET HONEYEATER	49	13	SHAMA THRUSH	18	2
SPLENDID FAIRY WREN	44	11	WESTERN SPINEBILL	18	5
WHITE FRONTED CHAT	37	9	WONGA PIGEON	17	5
WHITE WINGED FAIRY WREN	35	8	NEW HOLLAND HONEYEATER	17	5
BROWN CUCKOO DOVE	34	8	YELLOW TUFTED HONEYEATER	16	6
COMMON BRONZEWING	32	10	NOISY PITTA	15	4
BLUE FACED HONEYEATER	30	7	SILVER EARED MESIA	14	3
SACRED KINGFISHER	29	6	RED BACKED FAIRY WREN	14	4
WHITE BROWED SCRUBWREN	29	9	EASTERN YELLOW ROBIN	13	4
TURQUOISE FAIRY WREN	12	3			
PARTRIDGE PIGEON	12	2			
GOLDEN WHISTLER	12	5			
RAINBOW PITTA	12	3			
WHITE BREASTED WOODSWALLOW	12	3			
WHITE NAPED HONEYEATER	11	4			
RED BACKED BUTTON QUAIL	10	2			
STRIATED GRASSWREN	10	3			
SPINY CHEEKED HONEYEATER	8	2			
FLAME ROBIN	5	1			
ORANGE CHAT	4	2			
WHITE QUILLED ROCK PIGEON	4	1			
DUSKY WOODSWALLOW	4	2			
ORIENTAL MAGPIE ROBIN	3	2			
CRESCENT HONEYEATER	2	1			
RUFOUS WHISTLER	2	1			
SPOTTED PARDALOTE	0	0			
STRIATED PARDALOTE	0	0			
SCARLET ROBIN	0	0			

Red-fronted Macaw
PHOTO ETTORE BALOCCHI

BRIGHTER NEWS FOR

Threatened Red-fronted Macaws

AUTHOR
DR DAVID WAUGH

PHOTOS
FUNDACIÓN VIDA SILVESTRE

THE exquisite Red-fronted Macaw *Ara rubrogenys* is a living gem of the eastern foothills of the Andes. It gives colour to a semi-arid landscape dominated by thorny scrub and cacti, the product of centuries of human alteration of the native dry forest habitat. The Red-fronted Macaw is endemic to a small area of the inter-Andean valleys of Bolivia where, in addition to the impact of long-term impoverishment of the habitat, it has suffered from illegal trade and persecution as a crop pest. The result has been a decline in the wild population, from perhaps as many as 4000 individuals three decades ago, to what BirdLife International now states as currently 600-800 total individuals, equating to approximately 134-272 mature individuals. Due to its precarious situation, the Red-fronted Macaw is classified as 'Critically Endangered'.

SPECIES DISTRIBUTION

Research funded by the Loro Parque Fundación has revealed that the population, despite high dispersal abilities, is genetically structured into four different subpopulations, with almost no gene flow between them due to strong fidelity to birthplace. Apart from a few pairs that breed in palms, all breeding takes place in colonies on cliffs, where the individual pairs nest in crevices.

On the face of it, the outlook for the Red-fronted Macaw is bleak. However, two recent studies raise the possibility of a brighter future for the species. In the first study (Herzog *et al* 2022), despite the remoteness and inaccessibility of most of this region, the researchers made a rigorous collection of data on the total, local and breeding population sizes of the Red-fronted Macaw in its entire geographical distribution. They compared their results with those of the previous most recent survey, conducted in 2011, which reported a total of 807 macaws and a breeding population of about 20%. In 2011 the disjunct macaws were distributed across eight breeding and six foraging areas.

The study 10 years later increased the survey effort and geographic coverage, surveying the entire known breeding range in four watersheds, and focusing on nesting sites. The researchers have reported an estimated total population size of 1160 macaws and a breeding population of 23.8–27.4% (138–159 nesting pairs). They also discovered four new breeding areas. Watersheds and breeding areas differed widely in nesting pairs and total macaw numbers. One watershed (Mizque) held 53% of the species' breeding and 41.5% of its total population and had the highest percentage (30.7–34.9%) of the population breeding,

whereas another watershed (Pilcomayo) had the lowest values (6%, 8.5% and 14.1–18.2%, respectively). Two of the four documented genetic clusters (subpopulations) each held well over 50 breeding individuals, and two of the eight breeding areas documented in 2011 were found unoccupied in 2021. The researchers suggest that the Red-fronted Macaw no longer meets IUCN Red List criteria for 'Critically Endangered' species and that it should be downlisted to 'Endangered.'

Red-fronted Macaws preening themselves on a cliff-face
PHOTO COREY RAFFEL

POSITIVE OUTCOMES

The other study (Hambuckers *et al* 2021) acknowledges that today's threats challenge the short-term survival of the Red-fronted Macaw but concludes that predicted changes in the landscape and food resources offer positive perspectives for the species in the longer-term.

The approach taken by these researchers was to consider the Red-fronted Macaw as a tropical mountain bird, a category against which the main threats are habitat destruction and climate change. The Red-fronted Macaw breeds between 1100 and 2700m above sea level, and disperses higher to about 3000m and lower exceptionally to 550m. Climate change is supposed to particularly affect the tropical Andes and notably Bolivia, and climate change scenarios suggest significant warming and important modifications of the precipitation regime. Tropical mountain birds are particularly at risk because, when shifting their distributions upwards to higher altitudes, the new area of occupancy narrows. The researchers contemplate the possibility that, given the magnitude of warming predictions, sufficient steep river cliffs for nesting and appropriate food resources might not necessarily be available at higher altitudes.

To predict changes in the distributions of animals, and of plants, Species Distribution Models (SDMs) are commonly used with climate information only. However, such use of SDMs neglects the evolution of other components of the environment, like food resource availability. Therefore, the researchers compared results using SDMs with results from using a process-based Dynamic Vegetation Model (DVM), where they included in their analysis the environmental conditions relating to all known food plants of *A. rubrogenys*. Under future climates, the Red-fronted Macaw SDM showed increased probabilities of presence over its area of distribution and connected range extensions. For the food plants, the DVM produced increases of productivity, occupancy, and diversity, also towards higher altitudes.

The results offer positive perspectives for the Red-fronted Macaw, more optimistic than initially assumed.

Red-fronted Macaws inhabit tropical mountain areas of altitude between 1100 and 3000m
PHOTO FRANK WOUTERS

Vilca Anadenanthera colubrina seedpod is part of the diet of wild Red-fronted Macaws
PHOTO JOAO MEDEIROS

Red-fronted Macaws breed in these cliffs
PHOTO GAUMUT/CC SA

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Kaka Parrot
PHOTO BENT PEDERSEN

Kākāpō Parrot
PHOTO LIU YANG GETTY IMAGES

Kea
PHOTO LUIS ORTIZ-CATEDRAL

Norfolk Island Green Parrot
PHOTO LUIS ORTIZ-CATEDRAL

New Zealand Parrot Trust

UPDATE

AUTHORS
CAROLYN PRADUN

Malherbe's Parakeet, on Blumine Island, one of the NZPT's current focus species
PHOTO LUIS ORTIZ-CATEDRAL

THE New Zealand Parrot Trust (NZPT) was established in 2018 as an affiliate of the World Parrot Trust (WPT). It was featured in the June-July 2021 edition of ***Australian BirdKeeper*** but it is well worth expanding on the work it carries out.

HISTORY

The NZPT was founded by a group of individuals with a common interest in conserving parrots—Joe and Shelley Davenport, Steve Milpacher, Luis Ortiz-Catedral and James Gilardi. The aim is to promote New Zealand-developed parrot conversation strategies and assist with advancing the implementation of those strategies to other threatened parrot species in the South Pacific region. This region includes numerous archipelagos and island nations that hold a vast diversity of parrots that live in habitats from the sub-Antarctic to the sub-tropics.

Some of these parrot species are among the most endangered worldwide, largely due to the high vulnerability of island birds to introduced predators and competitors.

Because many parrot species in the South Pacific share similar threats, management actions that can assist the recovery of a given species on one island can be fine-tuned to assist another species on a different island. While there is ongoing sharing of expertise between nations in the South Pacific, sometimes it can be difficult to find seed funding for projects. Hence the idea of forming the NZPT, with a focus on parrots of the South Pacific.

CURRENT PROJECTS

The NZPT is currently focussed on the following species:

- Kākāpō *Strigops habroptila*
- Kea *Nestor notabilis*
- Tasman Parakeet *Cyanoramphus cookii*—commonly referred to as (in Australia) the Norfolk Island Green Parrot
- Malherbe's Parakeet *Cyanoramphus malherbi*
- Kākā *Nestor meridionalis*

Partners in this work include the New Zealand Department of Conservation, Massey University, the Kea Conservation Trust, Auckland Zoo Conservation Fund, Brian Mason Scientific & Technical Trust, and the Mohamed bin Zayed Species Conservation Fund.

We will provide further updates on these projects in a future issue of ***Australian Birdkeeper***.

EXPERT STAFF

The NZPT brings together an experienced team of experts. Key personnel include the following directors:

Steve Milpacher

Steve has been a passionate advocate for parrot conservation and welfare for more than 30 years. He has a diverse background in business development, communications and non-profit management. Steve joined the WPT team in 2007 and is the director of operations. He also serves as a board member of the Canadian Parrot Trust, Ara Manzanillo, and the Macaw Recovery Network. He has travelled extensively to observe wild parrots, has presented at international conferences, and written numerous articles for magazines and journals. In his spare time, Steve is an enthusiastic wildlife photographer whose pictures have been published in magazines, books and calendars.

Dr Luis Ortiz-Catedral (PhD)

Luis is a conservation biologist and wildlife manager specialising in recovering populations of threatened island vertebrates. He has studied wild parrots in New Zealand and Australia for 17 years. In the last decade, he has also led recovery programs for mockingbirds, iguanas and terrestrial snakes in the Galapagos Islands.

Originally from Mexico, Luis completed his postgraduate studies in New Zealand, focusing on translocation techniques for Kākāriki Parrots. His research has contributed to developing a blueprint for Kākāriki translocations in New Zealand, and to a better management of pathogens in wild parrot populations. Luis' research encompasses a range of topics in Conservation Biology, including the taxonomy and conservation of New World monocotyledons, reproductive biology and management of threatened island birds, management of disease risk in small avian populations, and the development of survey methods for threatened island vertebrates such as parrots and land iguanas. He is the director of the WPT's Oceania Conservation Program.

Dr James (Jamie) Gilardi (PhD)

Jamie is a conservation biologist specialising in behavioural and physiological ecology, with special focus on tropical forest birds and marine vertebrates. He has studied wild parrots and other birds for more than 25 years, authoring several papers on ecology and parrots in the wild bird trade. He has a PhD in Ecology from UC Davis, writing on parrot social behaviour, foraging ecology and soil-eating in South-eastern Peru.

Jamie joined the WPT in 2001 and is currently executive director. His role includes developing, designing and implementing field conservation programs, policy planning and campaigning, grant writing, photo and video documentation of projects, and producing educational DVDs for public distribution.

FUTURE WORK

The skills and experience of this team align with the WPT's philosophy of bringing together global wildlife conservation and welfare specialists to direct and put into action effective programs to protect parrots. This approach is rooted in science and decades of first-hand experience in the field.

The NZPT will continue supporting conservation of the rarest parrots in the South Pacific through a mix of direct project involvement, such as the re-introduction of *Cyanoramphus* species (mentioned above) into mainland islands, and by continuing to provide grants, funding and support to existing NZ-based not-for-profit organisations already working on the conversation of parrots, such as the Kea Conservation Project and the Kakapo Recovery Program. Thanks to the ongoing support, in coming years the scope and geographic range of projects will be expanded.

For further information on this work and how you can help, please visit **www.parrots.org** and www.parrots.org.nz. To sign up to our monthly newsletter Flock Talk, go to **www.parrots.org/flocktalk**.

Steve Milpacher
PHOTO STEVE MILPACHER

Luis Ortiz-Catedral with Kea
PHOTO STEVE MILPACHER

Jamie Gilardi with Kea
PHOTO STEVE MILPACHER

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Who Makes the Rules

AROUND BIRD KEEPING?

AUTHOR
SAM DAVIS

GOVERNMENT	RESPONSIBILITIES		PRACTICALITIES FOR BIRD KEEPERS
LOCAL GOVERNMENT	NEIGHBOURHOOD AMENITY		NOISE
			SMELL
			RODENTS
	PLANNING		AVIARY SIZE
			AVIARY LOCATION
			AVIARY DESIGN
STATE GOVERNMENT	ANIMAL WELFARE		HEALTH
			NUTRITION
			SECURITY
			HOUSING
	PROTECTING WILD POPULATION		NATIVE ANIMAL LICENSES
FEDERAL GOVERNMENT	IMPORT	BIOSECURITY	PROTECT DISEASE ENTERING AUSTRALIA
		BIODIVERSITY	PREVENT FERAL INVASION
	EXPORT	POACHING	PROTECT WILD POPULATION
		SMUGGLING	

As many will know, there are a range of laws affecting aviculture at each of the three levels of government in Australia—local, state and federal. But which laws govern which aspects of our hobby? This article will provide a brief outline, so that when you see the Canary and Cage Bird Federation of Australia (CCBFA) lobbying for or against an amendment, you'll have a clearer understanding of the source of the problem...and perhaps be motivated to write in support of our action.

Laws at all levels of government are updated at regular intervals, often every 10 years, but amendments can be passed in the interim periods. It is during these times that advocating for change is most fruitful, but the CCBFA is not the only advocate for change—and some of those lobbying oppose aviculture.

LOCAL GOVERNMENT—ALL ABOUT THE NEIGHBOURS

In terms of animal keeping, local government is largely concerned with neighbourhood amenity—factors that may affect your neighbour's enjoyment of their property. In the case of dogs and cats, local council requires you to register these animals, including their microchip number. This enables lost or escaped animals to be returned promptly and is now used to monitor breeding and identify unregistered and potentially unscrupulous intensive breeding facilities. This is not so relevant to bird keeping unless you run a commercial enterprise or pet shop—most of us are hobbyists.

For bird keepers, neighbourhood amenity focuses on factors such as noise, smell, rodents, proximity to neighbours etc. Many councils implement a range of controls, such as limits on the number of birds, and planning controls limiting the size of aviaries. Generally, these controls are not rigorously enforced unless neighbours complain—which at times they do.

I have dealt with many complaint cases in my time as CCBFA president and, in the majority, a sensible solution can be negotiated with council's compliance officers. However, there is the odd council—often it is a single councillor or overly zealous compliance officer—more intent on the letter of the local law than resolving what is generally a simple neighbourhood dispute.

When local laws are changed it is important to look closely at what is being proposed and the potential effects on bird keeping. Just prior to writing this piece, I completed a submission opposing some changes proposed by Gold Coast City Council—just one submission of many to local government.

Often councils produce their local laws regarding birds based on a state-provided model of local laws. It is for this reason that Animal Care Australia (ACA) in association with CCBFA is preparing recommended local laws for birds and other animals.

Planning controls govern the size and location of aviaries, particularly in residential areas. Most planning controls for aviaries are state-based but enforced by local government. For example, in NSW the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* permits two aviary complexes, each up to 10sq m, in residential areas. These are classified as 'exempt development', meaning no development application (DA) is needed. A DA can be lodged for larger complexes.

Experience shows that, so long as neighbours are aware and supportive, there is rarely an issue. Smaller residential blocks, such as those under 400sq m require more care as neighbours are far closer. It would be wise to submit a DA if your aviaries are not exempt, and it is always wise to engage personally with neighbours from the outset to avoid unforeseen issues.

STATE GOVERNMENT—ANIMAL WELFARE & PROTECTING NATIVE ANIMALS

Animal Welfare

Government at the state level is responsible for animal welfare. Animal Care Australia's definition of animal welfare is...

'... the physical and mental state of an animal in relation to the conditions in which it lives and dies.

An animal experiences good welfare if the animal is healthy, comfortable, well nourished, safe, is not suffering from unpleasant states such as pain, fear and distress, and is able to express behaviours that are important for its physical and mental state'.

Currently the laws governing animal welfare generally sit within the Agriculture or Primary Industries portfolio, hence responsibility rests with the state's agriculture minister. There are reviews underway of animal welfare laws in many states. In my role as vice-president and bird representative for Animal Care Australia (ACA), I regularly appear at parliamentary inquiries and attend meetings with politicians and senior bureaucrats. Readers can examine relevant submissions and minutes of such meetings on the ACA and CCBFA websites.

CCBFA argues for codes of practice for aviculture at the state level that specify basic standards of care. Such codes already exist, although many need updating. These codes of practice are recommendations and are legally available as a defence should animal welfare charges be laid. Aviculture does a terrific job and has a fantastic history of self-regulation—we do not require enforceable codes that open up our hobby to the overregulation consequences currently being experienced by dog breeders in Australia, and many animal keepers and breeders internationally.

State government animal welfare law is where the war with animal rights extremists is currently being waged. These activists have a long-term plan. They chip away, adding a little bit of regulation here, a policy or licence condition there, and over time this makes it progressively more difficult to keep animals. They argue against captive breeding, while promoting overregulation of rescue and rehoming. The end game for animal rights extremists is to put an end to all animal keeping, including aviculture.

Protecting Native Animals

State governments also have responsibility to regulate the keeping of native animals, including birds, reptiles and some native mammals, to ensure the protection of wild populations. Licensing aims to prevent poaching and to ensure captive birds are not inappropriately released to cause issues for wild populations.

During the early 1970s, legislation was enacted in most states making it illegal to keep native birds. Within the legislation was a list of exempt species which include many of the common native species we keep—Budgerigars, Zebra Finches, Cockatiels etc. In addition to these exemptions were lists of other species that could be kept under licence. This system remains in place in various forms in all states and territories to this day.

There is a problem with the native bird licensing system. It boils down to the omission of a suitable procedure to move species from licence to exempt, from prohibited to licence, or indeed from licence to prohibited. Such a process has never been enacted in most states (SA is arguably an exception). This has caused all sorts of grief and inconsistencies between states.

Most of the effort over decades by numerous people has been directed at moving one or more species from prohibited to licence or from licence to exempt. In Queensland we recently had major changes to these lists, with many common species of finch and parrot moving to exempt, and many species of softbill now able to be kept for the first time. A huge win—yet there is still no procedure for future list changes.

Negotiations in NSW stalled and have recently restarted, and the process is just about ready to get underway in Victoria (don't hold your breath!). The issues in NSW, and likely in Victoria, are due to animal rights influences. For example, the NSW-based animal rescue organisation WIRES opposes the keeping of any native animals in captivity. In Western Australia a number of years ago, the Minister promised an avicultural consultative committee would be set up to address the issue, but this has not occurred. In the Australian Capital Territory things are much brighter, with agreement on list changes, but we await implementation.

Details of the negotiations in various states in recent years are included on the CCBFA website under the documents tab, or within the minutes of meetings contained within our journal *Feathered World*. I will write a column detailing the issues around native bird licensing for a future edition of ***ABK***.

FEDERAL GOVERNMENT—IMPORT & EXPORT

I discussed import and export in detail in the previous edition of ***ABK***, so I won't go into detail again. In summary, the federal government is responsible for ensuring animals leaving and arriving through our borders have been legally sourced and that animals entering do not have any disease-causing pathogens that are a biosecurity risk to Australia's wild or captive animals.

Sadly, the import and export of birds is so heavily restricted currently that it has created an incentive for smuggling, and likely some poaching. CCBFA continues to argue for a sensible import and export system for captive-bred birds that is accessible to all. We wish to stop the illegal trade and ensure the system is not used to profit a few unscrupulous operators.

ANIMAL RIGHTS GROUPS AND HOW THEY AFFECT US

You will all be aware of the increasing influence of animal rights extremists who believe no animals, including birds, should be kept in captivity. Organisations such as PETA and Animal Liberation are upfront animal rights organisations—other organisations are less upfront about their support. The former policy director for RSPCA Australia, Jed Goodfellow, has been central to the recent formation of the Alliance for Animals, described on their website as a 'national charity leading a strategic alliance of Australia's key animal protection organisations to create systemic change for animals'. This newly formed alliance includes Animals Australia, Voiceless, World Animal Protection and Humane Society International, which all subscribe to animal rights philosophies.

In Australia we also have the Animal Justice Party (AJP)—the political arm of the animal rights movement. The AJP currently has two members in the NSW State Government Upper House (Emma Hurst and Mark Pearson) and one member in the Victorian Upper House (Andy Meddick). There are also AJP councillors elected in several local government areas. These politicians are having a real, and often concerning, influence on animal welfare legislation in these states. The AJP is running candidates in all state elections and many local government elections.

https://www.animalcareaustralia.org.au/information/animal-welfare-vs-animal-rights/

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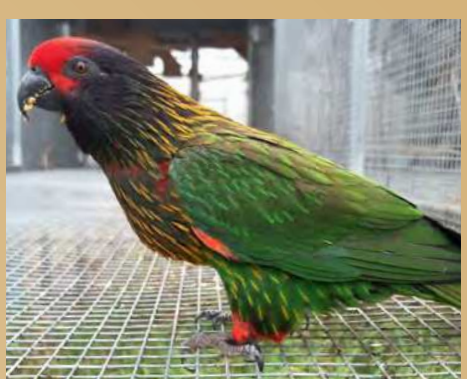

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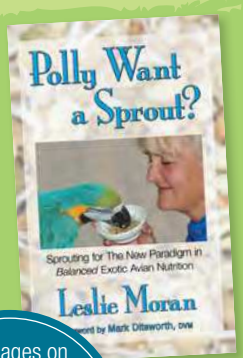

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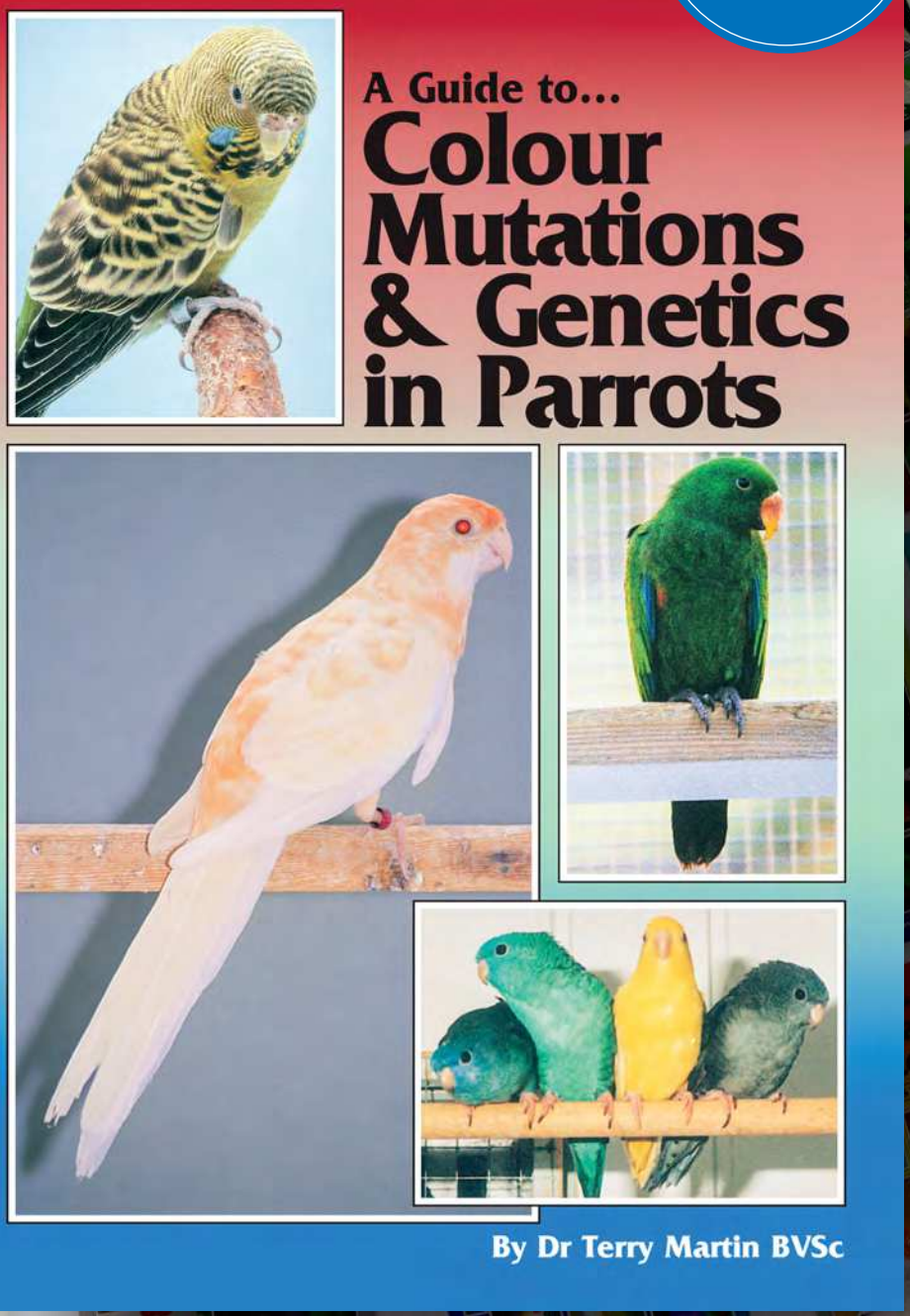

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