

CONSERVATION CORNER

Avicultural Conservation : Strictly for the Birds

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The Budgie. How many avicultural careers have been launched with this brilliant little character? Probably the majority, certainly it was the celebrity bird of my childhood endeavours. It commenced with a wooden hutch aviary stocked with a small flock supplied by a family friend. My folks didn't know much about them, and as they were acquired for me anyway, I was introduced to the basics and their daily care was my responsibility. It was a petty hit-and-miss affair but a few trips to the library and healthy doses of trial and error saw me succeed and graduate to a tidy little menagerie: lovebirds, quail, finches, several cockatoos and an assortment of waterfowl.

I vividly recall my first Gouldian Finches. I could barely comprehend that such perfection could exist outside my imagination; they were a pinnacle acquisition for me at that time. Even in death they were so lovely that I could not bear to part with them, and having an interest in bird illustration, would stow them in the freezer for 'anatomical referencing' later. I was the bane of my poor mum's life; she still recounts with a perennial horror the first time she found one of these tiny cadavers nestled between the Choc-ices and lamb chops!

Showing our true colours...

Ornithology is one of my great ongoing passions. As a bird keeper at Adelaide zoo, I care for a gorgeous array of feathered charges on a daily basis. In order to grow in this career, I have also tackled studies in Ornithology with Charles Sturt University. Both of these endeavours have helped inform my perspectives on a number of issues, one of them being the very necessary conservation efforts required for many species. The Gouldian has taken on new dimensions. Not just a living masterpiece to charm the senses, I also see them as ecological components that need a hand. Their wild range is subject to the usual litany of woes wrought by European intervention. Changed fire regimes and cattle grazing that interfere with food supplies, fragmentation of habitat and mining are further compounded by air-sac mite infection as a by product of the above.

The Gouldian, as many of you are aware, enjoys a robust captive status. Yet many captive Gouldians are so removed in appearance from their wild counterparts that one could be hard pressed to recognize them as *Erythrura gouldiae* at all. A host of mutations has seen this exquisite species altered drastically and not every one results in an individual that equals the vigour of the ‘natural’ type. Indeed, any conservationist looking to aviculture as source of good stock for future rehabilitation might be hard pressed to locate suitable individuals. Even birds that look like the real thing (phenotype) can carry genetic encoding for characteristics established in captivity (genotype).

Before you conclude that I’m on a rampant anti-mutation campaign, I’ll outline my basic view. Mutations in wild populations have a very real role to play in the process of speciation in birds. They can enable an evolving type to develop a character that might profit its lineage in the heady lottery of natural selection.

However, in a captive context, our hand in this process introduces an “unnatural selection”. A mutation that emerges in wild populations must be a definite improvement with advantages over its predecessors to really cut it in the survival stakes. By contrast, novelty is often the only criteria in aviculture. Fascinating variations on the theme of many species have been developed. In some species such as the Indian ringneck parrot, the range of colours and the complexity of their modes of inheritance spiral to mind boggling heights – and who could deny that the recently emerged violet strain is anything other than breath taking? Of course, as in many human endeavours, purchasing such an individual also creates another strain – on one’s hip pocket! Cash drives the mutation machine in aviculture. It is often profits that prevail over the maintenance of vigorous natural bloodlines.

We face a risk that quality wild-types will be consumed by a flood of genetic variants. It behoves those who do produce mutations to learn about the modes of inheritance of the colours that they keep, for the vigour of their species as well as the immense satisfaction this can bring. Will we arrive at the day when there are no original Scarlet-chested Parrots, only a feathery paintbox of puny phenotypic caricatures?

Colour-fastness...

There is a real satisfaction in embracing the cause of wild type aviculture. One of the first birds to demonstrate this is the Budgerigar. In that early assemblage of mine I remember a natural green individual among blues and Lutinos. Now,

true wild budgies, or shell-parrots as they are sometimes marketed, are making a modest but decent come back as a worthwhile and charming aviary subject. In this way, aviculture has come full circle and everything old is new again. The original grass green midgits that started it all reclaim their niche. We see what I believe is healthy scenario - colour fanciers counterbalanced by a growing number of wild type enthusiasts. I do not advocate the elimination of mutations but I do fear the elimination of their original cousins, hence I *do* promote maintenance of potent strains of the latter. Give them a go in tandem with your mutative adventures and do your bit for their conservation in aviculture.

Rare opportunities...

It's not only certain colours that are worth conserving; actual species could also benefit from your skills. For a number of reasons, some populations of previously abundant aviary birds are in decline.

Finches like the **Yellow-rumped Mannikin** *Lonchura flaviprymna* and **Pictorella Mannikin** *Heteromunia temporalis* have a relatively low captive status. With the cessation of live trapping for the pet and aviary trade, future stocks are limited and their continuance therefore subject to our endeavours.

Why their decline? It seems that the *Lonchura*-type generally lack the appeal of other seed-eaters because they are not as spectacularly marked as their counterparts. By comparison, the carnival spectrum of the Gouldian does make them appear rather like poor relations in Beige cardigans! It is true that more muted tones are predominant amongst them, but is that reason to overlook them?

They have their own set of charms and offer an opportunity to acquire more husbandry knowledge about this significant clan of Australian finches. A colony of Yellow-rumped Mannikins can provide a peaceful and pleasing counterpoint to other showier species, dapper with their powdered faces, rich chestnut wings and mustard yellow rumps (Kingston 1998). In addition, the market value of both species is decent and offspring can potentially cover the initial purchase price of founding stock in a season or two. Their more common relative, the **Chestnut-breasted Mannikin** *Lonchura castaneothorax* is a familiar native finch, so many of you would have cut your avicultural teeth with their husbandry requirements. There is even scope to form a syndicate with like minded friends to establish a couple of colonies, which is an excellent safeguard against a possible calamity if one is maintaining a single population.

Also, remember that you will have in your possession birds that are listed in the **Action Plan for Australian Birds** published by Birds Australia and Environment Australia (Garnett & Crowley 2000). If you need an incentive, remember that experiences with a colony of Yellow-rumps or Pictorellas will mean that you are working with species that have conservation status and are therefore worthy of your efforts.

While you're about it...

You may be surprised to learn that you are already breeding finch species that are of conservation concern. Many Australian finches are beset by similar problems as the Gouldian. The vulnerable southern race of the **Black-throated Finch** *Poephila cincta cincta* has retreated northwards in response to clearance of woodland and the onslaught of sheep and rabbits. Endangered **White-bellied Crimson Finches** *Neochmia phaeton evangeline* lose their preferred habitat of rank waterside grasses to wallowing pigs and thirsty cattle. The avicultural appearance of this form in recent times is the thought to be the result of illegal trapping. All three subspecies of the **Star Finch** *Neochmia ruficauda* range from Near Threatened to Critically Endangered (southern race) due to over-grazing and trampling of suitable habitat that would otherwise provide cover and food. Habitat fragmentation and the invasion of exotic grasses that favour the expansion of the competitive **Red-browed Finch** *Neochmia temporalis* has seen the **Diamond Firetail** *Stagonopleura guttata* become Near Threatened. All are subject to alteration of suitable habitat with changed fire regimes (Garnett & Crowley 2000).

So, *while you're about it*, remember to keep detailed notes on your experiences with such species. It is every day aviculturists that can contribute enormously to the skills and knowledge needed to shore up the efforts of conservation.

Success stories...

A superb example of this is that of the **Beautiful Firetail** *Stagonopleura bella*. Aptly named, it is a cryptic denizen of dense, damp vegetation in a range that extends from the Mt. Lofty ranges to South-east NSW and Tasmania. I enjoyed the privilege of observing them there at the Deny King bird-hide at Melaleuca in the South-west National park – on a bird-feeding table with Orange-bellied parrots! That was a red-letter (or tick?) day!

Of conservation concern in its NSW range, the services of Victorian Aviculturist Brian O' Gorman were deployed to make a detailed study of the

species in field and aviary (Shephard 1994). The captive component of the programme modelled the benefits of such a procedure. 295 hours were invested in the observation of nesting and breeding habits alone and yielded vital information on the life history of the species. Along with this, O’Gorman was able to contribute to new perspectives on vocalizations, copulation, nuptial plumage and juvenile development. The recordings of their unique calls have proved invaluable to wild census methods.

Other Avicultural luminaries have carried out vital work on the **Lord Howe Island Woodhen** *Gallirallus sylvestris*, **Freckled Duck** *Stictonetta naevosa*, **Orange-bellied Parrot** *Neophema chrysogaster* and **Plains Wanderer** *Pedionomus torquatus* (Shephard 1994). At Adelaide Zoo, aviculture has assisted the **Regent Honeyeater** *Xanthomyza phrygia*, **Black-eared Miner** *Manorina melanotis*, **Swift Parrot** *Lathamus discolor*, **Malleefowl** *Leipoa ocellata* and **Hooded Plover** *Thinornis rubricollis*. Some of you may be aware of Phil Digney’s painstaking work with the **Seychelles Magpie-robin** *Copsychus sechellarum* and Ryan Watson’s recent endeavours with the **Mauritius Echo Parakeet** *Psittacula echo*. Field procedures coupled with a vital avicultural component have seen these diverse species, some of the world’s rarest birds, thrown a timely lifeline.

They are the tip of a monstrous avian iceberg. Keep in mind that professional conservationists all commenced as dedicated learners. As far as I’m concerned, the mysteries and challenges of the natural world are so vast, how many of us can say we are ever anything but learners? I invite all of you to meld the two: become **Professional learners**. As you enjoy your hobby and indulge your passion, remember that you have the potential to make a difference to the future of the world’s avian heritage. Charity *does* begin at home.

Think globally, Act locally.

References – For future investigations....

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