



Cape Parrots in an African Collection

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The rare indigenous Cape Parrot *Poicephalus robustus* [Editor's Note: the *Poicephalus robustus* is sometimes treated as a separate species] has captivated my attention since my adolescent years in the Eastern Cape. As a ten-year-old, I unsuccessfully tried to sweet talk a single bird out of an elderly couple who had him in an antique bell cage on their farm verandah outside Knysna. Every school holiday I would trek up to Rheedendal and put on my boyish charm, but to no avail. The bird had been part of the fat Mrs. Coetzee's life for 20 odd years and she would hear none of my not so subtle suggestions. Sadly for the parrot, Mrs. Coetzee ate herself into a heart attack and her not-so-grieving husband took himself off to Mauritius (with his wife's divorced sister), leaving the poor bird to starve to death.

I managed to obtain my own pair of Capes some 14 years later. Since then I gradually managed to locate odd birds and make up a number of pairs. This proved increasingly difficult with the inter-provincial permit requirements for these indigenous birds. Nevertheless after eight years of perseverance I had managed to set up 10 pairs of Capes on permit with the then Natal Parks Board.

In 1998 I was delighted to raise 18 progeny, mostly parent raised. I was especially glad to have bred second generation birds from two tame 10-year-old hand raised cock birds bred by the late Jack Ruff, as well as from a three-year-old parent-raised hen bred by Frank Hilton. These birds made excellent parents and their tameness enabled stressless behavior observation and nest inspection a pleasure.

Although they are shy by nature, I have had no problem in persuading the adult birds to breed. The aviaries

used were our suspended design 3.6m long x 1.2m x 1.2m (approx. 12 x 4 x 4 feet) as well as some which were only 2.4m long x 1.2m x 1.2m (8 x 4 x 4 feet). The smaller aviaries were used for rescue cases which could not fly for various reasons: some had survived being shot, some were vehicle casualties and others had permanent wing injuries.

All aviaries have a heavily planted shrubbery (600mm separation) on the outdoor section. Flowering *Tecomaria* and *Hibiscus* as well as berry prolific *Pyracantha* and *Nandina* species are preferred. The indoor section has no visual barrier between adjacent pairs except that created by the nesting boxes. Birds are fed on the same side as the nests, i.e., indoors. An aviary inspection door on the bottom of each aviary is also situated in the indoor section. The birds perch above human eye level on hardwood fruit-tree and softer eucalyptus perches.

A variety of wooden nests are readily used including natural hollowed syringa logs approximately 250-350mm ID (10 - 14 inches), vertical bootshaped boxes approximately 400mm high x 300mm deep x 250mm wide (16 x 12 x 10 inches), and ordinary vertical boxes approximately 400mm high x 250mm x 250mm (16 x 10 x 10 inches). Chipped eucalyptus and pine are used as substrate which the birds chew into small splinters.

Courtship involves loud vocalization with birds flying rapidly and repeatedly up and down the flights. The cock bird drops his wings and feeds the soliciting hen a number of times while both birds intermittently bob their heads in a vertical plane and raise their wings in an archangel type display. The cock stands on the hen's back while mating, copulating vigorously and rhythmically from alternating sides and all the time balancing with drooped wings. I have only ever observed mating in the early morning and late afternoon, when the birds are particularly active.

Three to four pure white and usually very rounded eggs are laid during Autumn-Winter (April-May-June) or during early Summer (October-November) at 2-3 day intervals,

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although pairs may go down in any month. Pairs will double and even triple clutch if first and second clutch eggs are removed for artificial incubation. Eggs are incubated at 37.5°C (99.5° F.) at sea level and because of their round shape are inclined to position themselves with airspace facing upwards in incubators which negatively affects embryonic development unless hand turned at least once daily. In my experience moving carpet turning is preferable to rollers in this species. A typical egg measures approx. 23.5mm wide x 28mm long. Internal pip to hatch is 48-72 hours.

Pairs left to raise their own young will usually breed twice per year. Unless the first clutch of youngsters is removed, the second clutch of eggs is likely to be damaged by the youngsters who still join the parents in the nest. The breeding birds, however, often start to chase and harass their same sex chicks if they want to recycle.

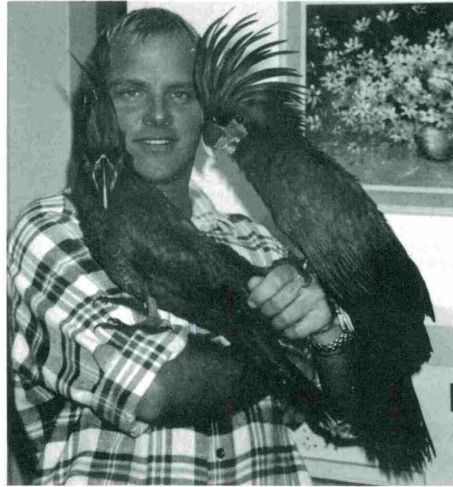
Incubation is by the hen alone and chicks weigh typically between 9.5g and 11g at hatch. The cock will spend a lot of time with the hen in the nest. Originally wild-caught cocks will spend most of the time with the hens in the nest during breeding, although aviary-bred cocks tend to stand guard outside the nest entrance.

Originally wild-caught birds usually remain shy and disappear into the nests at the first sign of human approach. Although described as quiet, I have found them to be quite noisy in the early evenings, when they are most active. The recognition call is a short, shrill and very high pitched whistle which is in my opinion loud. The defense and distress growl is similar to that of Greys and is observed during nest inspection. As with Greys, if disturbed on the nest, they will often try to burrow into the nesting substrate.

Chicks are straightforward to handraise and they thrive on Kaytee Exact® from the egg. Like other smaller *Poicephalus* they are fed on their backs and although I feed them upright, they are always allowed to lie on their backs to swallow until they roll themselves over. I have successfully used nominate Jardines to foster Capes.

Capes are covered in short, slightly offwhite down at hatching. This is

Photo courtesy of William Horsfield



William Horsfield with a pair of 1998 Palm Cockatoos 16 weeks old.

replaced by a very dense covering of pure white down until they are feathered. If pulled at 3-4 weeks they do equally well on AviPlus® Handrearing Parrot with a tablespoon of sunflower oil added per cup of feed. Fledged chicks compete with each other for feeding by the adults and flap one or both wings to fend off their nestmates while soliciting.

I use 9mm ID seamless stainless steel rings as Capes are inclined to play with their legbands and will crush softer rings onto their legs. Chicks are banded when small pin feathers appear on the wings.

Adults continue to dig and reshuffle the nesting substrate during the rearing process and I replace this 2-3 times before the chicks fledge. In our climate Aspergillosis is always a worry when shavings may become fouled and moldy and I certainly don't want the birds chewing on this material. It seems the adults are trying to clean the nest with this scratching behavior. This same behavior occurs prior to laying when the nest is being prepared for breeding. It ceases during incubation and commences again once the chicks have hatched.

Birds which do not feed their chicks may be encouraged to do so by removing, feeding by hand and replacing chicks for the first week. By this stage the strong soliciting noises and movements of the hungry chicks usually stimulate the adults to feed them.

In many ways the birds are behaviorally quite different from the now

separately classified Grey-headed Parrot *Poicephalus fuscicollis suabelicus* (formerly sub-species *Poicephalus robustus suabelicus*). They are far more active and the calls are noticeably different. *P. f. suabelicus*, especially hens, are steadier.

Adult Cape hens often have coral pink colour behind the cere. This may vary from none to quite noticeable. Adult cocks never do. Immature plumage resembles the hen although juvenile males have broader heads and heavier beaks. Hens have shorter beaks than cocks. The beaktip, as with the *P. f. suabelicus*, is very sharp and should not be mistaken as being overgrown. It is used as an extraordinary leverage tool.

Diet for Capes at my breeding facility is much the same as for other African parrots. In the wild the Cape is a habitat feeder and they are almost totally dependent on the *Podocarpus* (Yellowwood) forest. They breed in dead snags of these trees and eat the oily berries. If these seeds are mashed into a pulp they resemble a thick peanut butter type consistency. A large variety of fresh fruit and vegetables with an Avi-Plus® softfood and pelleted mixture is fed in the morning. Raw beetroot, corn on the cob, and cooked sweet potato are favorites. All nuts are relished and given liberally daily. A variety of soaked and boiled legumes (as in a racing pigeon breeding ration) as well as soaked sunflower, wheat, oats, and barley are offered for the lunch time feed and cooked rice, pasta, and cheddar cheese are offered as treats in the late afternoon when birds are inspected for the last time.

Coconut shells, pine-cones and marble sized stones are provided for environmental stimulation and are played with for hours.

Disaster Strikes

In managing to stimulate the birds to breed I was unknowingly unleashing a chain of events that would ultimately prove to be a tragedy for me personally but also a disaster for the species. When my 1998 progeny started dying for no positively identifiable cause, alarm bells rang loudly. Specialist veterinary and pathologist cooperation

determined severe anemia in the affected birds. All organs appeared morphologically normal although kidneys were enlarged in some birds. Blood parasites were suspected of destroying the erythrocytes (red blood cells) yet repeated examination of blood smears revealed nothing. The birds suffered loss of appetite and resultant lethargy and weakness. Advanced cases produced feces with yellowed urates and development of respiratory distress. Some cases produced a slimy, clear vomitus. All birds dosed into the crop regurgitated various amounts of drugs and nutritives over a matter of hours.

Nothing at all worked, and although at times individual birds seemed to improve, they all ultimately died. There was at no time any feather or plumage abnormality in any of these birds. All birds were feather perfect except the last two 1999 youngsters to fledge which presented typical PBFVDV symptoms with primary flight and tail feather shaft fractures. Birds tested negative for APV (Avian Polyoma Virus) and Chlamydia. Initially only 1998 youngsters were affected but then sub-adult and even adult birds became symptomatic and died.

Frantic pathologist cooperation finally isolated viral inclusion bodies in some individuals and they ran the PBFVDV (Psittacine Beak and Feather Disease Virus) PCR (Polymerase Chain Reaction) probe which tested positive. While this was a relief in terms of finally discovering a positive cause of death, the ramifications were enormous. Where did this come from? Which were the carriers? What was I to do?

The specialist avian veterinarian involved mentioned that in the many autopsies he had performed in past years around RSA [Republic of South Africa] on originally wild-caught Cape Parrots, it was not often that he could ascertain an obvious cause of death. It was usually presumed that the birds had died from stress associated with their capture from the wild. However, he observed that many had displayed similar symptoms to mine. During the recent annual Cape Parrot Census, a bird with mostly only primary flight and tail feathers was observed. This is typical of a PBFVDV infected bird and

gave cause for concern.

It has never conclusively been established why the Cape Parrot has been declining. There is the obvious destruction of the Yellowwood forests and the illegal trapping for the avicultural trade and occasional poaching and shooting by farmers whose orchards are being raided. However there have been no obvious signs of disease.

I decided to test my entire collection and to my horror discovered that almost all my breeding Capes were positive for PBFVDV. Considering that it is still believed that adult birds, if exposed to the virus, do not develop the disease, I was left wondering how these birds had become infected, as this had presumably occurred while they were young. Many of these birds had been obtained as originally wild-caught adults.

My thoughts turned once again to the wild birds and I discussed this at length with a friend in the Eastern Cape who has just had breeding success with the species. She has now tested her birds and they are, thankfully, negative. However, eight freshly trapped (wild-caught) birds were tested last week in East London in view of my results and seven of the eight tested positive!

This raises many questions while also answering some. It may also spell extinction for the species. What percentage of the wild population is infected? Presumably they became infected from infected escaped exotics or indigenous parrots. As it is highly unlikely that PBFVDV is an endemic virus, how long have the wild populations been infected? Some of my infected (originally wild-caught) birds were over 10 years old. As most of them were wild caught as adults (and it is presumed that only young birds become diseased when exposed) then it follows that they were infected up to a decade ago. Are there any resistant individuals? Should any negative wild birds be trapped to establish disease free captive populations? Should the wild birds be now left to their own fate? So many questions!

During the course of testing my entire collection of parrots, interesting facts emerged. I used a cocktail of three tests (PBFVDV, APV & CP) available through Molecular Diagnostic

Services (MDS). No adult birds of any other species in my collection were infected with any of the pathogens – only the Capes. This included the adult *Poicephalus f. suabelicus* which were also negative. However, juvenile birds were infected and one African Grey handraised with the Capes was positive as were three parent-raised Greater Jardines and two parent-raised Black-winged Jardines although their parents are negative. One handraised *P. f. suabelicus* was also positive. It would therefore follow that the *Poicephalus* genus as a group are susceptible to cross-species infection.

It has been observed in RSA collections that the PBFVDV is often genus specific, i.e., that the cockatoo strain doesn't seem to cross over to Amazons and the Ringneck strain to Lorys for example. The fact remains that this is a devastating and deadly disease. It is rife in many private collections. I can only attribute my relative containment of the virus to my stringent hygiene procedures and routines over the years.

It is truly terrifying waiting for those blood test results. I made a decision to euthanize all my positive birds. That was truly heartbreaking. It is simply too difficult to contain an airborne (feather dust) virus, no matter how careful one tries to be. All my years of hard work destroyed. Out of 38 Capes I today have 10 negative individuals remaining.

Looking at the 38 birds you would never ever guess they were carriers. They were all feather perfect. Photographers from all over the World have captured my birds on film and never could anyone have imagined this lurking disaster. I did spare my best breeding pair (infected) which were moved to total isolation within KZN to see if they could recover in time. However, the male died during a recent mild cold front, with which a healthy bird would have had no problem. More evidence that the compromised immune system even battles to deal with slight temperature extremes.

Although there is believed to be vertical transmission (through the egg) in this virus, perhaps the youngsters or even the embryo can be vaccinated with a PBFVDV vaccine. There is much research to be done still and sadly this



1999 Cape Parrot chicks, four females, two males, all PBFVDV negative.



Breeding female Cape Parrot

is a species which certainly cannot afford this type of setback.

I can only urge those fellow aviculturists who are privileged to own this species to have them tested for PBFVDV. Those who may be offered wild-caught birds should avoid intro-

ducing them into private collections at all costs.

Those breeders who are hybridizing the Cape with the Grey-headed Parrot should certainly stop doing this even if the progeny are destined as pets, as these hybrid birds do look similar to either of the parents and will eventually end up in potential breeding situations which will confuse breeders and alter the true genetic configuration of the species.

It is certainly illegal to have these birds without a permit in RSA. However, in KwaZulu-Natal the KZN Nature Conservation Services have, in view of the severe plight of this species and as a result of the PBFVDV results in my collection and of those discovered very recently in the wild, urged members of the public to contact their local zone officer, in order to facilitate testing of birds and pairing up of odd birds into breeding programs and of cooperation with the National Cape


Parrot Studbook, without fear of prosecution. However, should anyone be found to be in possession of these birds without the relevant permits then leniency will be far from the action taken.

As far as my Capes go I will sadly lose eight years of hard effort and start at the beginning again. Thankfully none of my other species have been infected. Although it has cost me tens of thousands of Rands in veterinary and pathologist fees, it could have been even worse. I now know where I stand. Every single parrot at my facility has been tested and is negative and never will another bird enter the front gate without a clean bill of health and stringent quarantine. I will continue to randomly test breeding birds and every bird bred and sold will be tested prior to leaving my premises. This was a totally horrible and emotionally exhausting experience and I could never wish it on anyone.

The Cape Parrot is now at more risk than ever before of becoming extinct. The recent national annual census conducted by Dr. Colleen Downs of PMB University, although affected by bad weather and a shortage of volunteer counters in the Eastern Cape, sighted fewer than 300 birds – way down on the 1998 figure of 500.

In terms of species survival this is certainly a pitiful number. Dedicated and concerted effort, research, and especially funding by aviculturists, conservationists, environmentalists, and academics is now needed in order to save this unique and intelligent bird of ours.

If you are in a position to help in any way whatsoever (financial pledges, volunteer work, or any suggestions and information) please contact the headquarters of the The World Parrot Trust Africa at The University of Natal, Pietermaritzburg, Zoology Dept. Dr Colleen Downs tel. 0331-2605127 or prof. Mike Perrin tel.033 1-26055103/2.

In the meantime I will plow my efforts into the new breeding season, hoping for less tragedy, new successes and above all – reassurances that the DNA tests and prognosis were accurate and that I did not kill my beautiful birds for nothing. 

Photos courtesy of William Horsfield



Outside view of the Cape Parrot aviaries.