

The Future of Avian Medicine in Australia

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Education, Learning and Knowledge

For a while, as a generalisation, "Avian Medicine" was considered by the larger veterinary population as being synonymous with "Chook Medicine" to put it politely, and "Fowl Medicine" to give it a connotation. Those of us who were fortunate enough to receive any undergraduate training in avian medicine were compelled to study commercial poultry production, husbandry, diseases and perhaps a little medicine. We were taught that *if it's sick slaughter it, together with a representative sampling of maybe 10-20 birds from the flock*, ie typical flock medicine of the times, necropsy them, take specimens, make a tentative diagnosis, and perhaps initiate treatment awaiting confirmation. I think my undergraduate training in the late 1960's in non-poultry medicine and husbandry amounted to 1 hour's lectures for medicine and husbandry and 1 hour for surgery and anaesthesia.

In recent years we have witnessed a mushrooming growth in interest in avian medicine in Australia, particularly as it applies to Caged and Aviary Bird Medicine. This has been paralleled by a corresponding growth in interest and knowledge overseas, particularly in USA, Germany, Holland, Great Britain and Japan. Yet our training at the undergraduate level with respect to non-commercial poultry avian medicine has not changed much, with one or two notable exceptions. I believe that credit is due largely to Dr Garry Cross for his innovations, interest, persistence and enthusiasm for restructuring the avian medicine undergraduate course at Sydney University to include a sizeable introduction to Caged and Aviary Bird Medicine. We appear to have lost Dr David Pass from the teaching faculty at Murdoch University and we have Dr Lucio Filippich with his growing interest in Caged and Aviary Bird Medicine at the University of Queensland. There are a spattering others within the Universities in Australia with tangible interests in furthering knowledge in caged and aviary bird medicine, and perhaps avian conservation management and wildlife medicine. However, at present, I think it is only at Sydney University that undergraduates studying veterinary science can obtain any significant formal instruction in Avian Medicine. Perhaps I am wrong. I certainly hope I soon will be. This is not to say or imply that we lack expertise, interest or numbers of those who can help us in this subject area in Australia. It is just that relatively few are associated with our formal undergraduate training and teaching schools. For example we will find others associated with many of our A Class Zoological Parks, some involved in research institutes and relatively many in private practice. One of the challenges of our future is to find better ways of tapping into their expertise, and perhaps of creating rewards for the additional efforts required to extend the benefits of their experience and knowledge to up and coming avian practitioners, avian scientists and formal educators in universities.

This Association (AAV), the Post-Graduate Committee in Veterinary Science, The University of Sydney, and the Australian College of Veterinary Scientists are three examples of organisations (albeit with many members also members of the other organisations) which are attempting to address these issues. Unfortunately the results of efforts commenced are often eroded in time by the pressure of new commitments. Some method by which the "expert" (be the 'expert' "big" or "little", "narrow" or "broad" in her or his focus) does the job once, properly and the work is fully documented in easily reproducible and accessible form needs to be developed. This work also needs to be in a form which can be edited, corrected and updated as easily as possible. We also need to establish some better way of examining our peers for accreditation. This may necessitate recognising each other's areas of expertise from the point of view of being examiners, as well as the format of examinations etc. (Everyone present at this meeting is

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encouraged to think about this and to participate in the forums at this meeting where we hope to address some of these issues.) It seems likely that this will in future involve more and more emphasis on video-recording, supported by voice taping, slides, illustrations etc, and in the not very distant future the transfer of this information to interactive CD-ROM computer disks for ready access by whoever needs or wants to learn the information. This information, stored in such form, or whatever follows it, will then be part of a global teaching library of the future. It will also be increasingly used as a reference library. Somehow, costs must be contained so that each of us can afford to access the library. Perhaps some system of monetary credits to those teaching will be incorporated to offset some of the costs behind their efforts, be they helping to fund additional research, subsidising attendance at future meetings.. let that imagination run wild!

The point of all this is that interest in and knowledge of Avian Medicine is growing at such a rate that without such aids and technology, those of us who rely on the scientific method for determining diagnosis and treatment will be swamped with so much information that it is doubtful that it will be assimilated by present generations.

As a response to some of these pressures and trends there is at this time a trend towards "specialisation". The general practitioner is now more and more "the general practitioner, small animals, companion animals, exotic animals or large animals" and perhaps increasingly we will see the "general practitioner, birds". Registered "Bird Specialists" may find themselves unable in practice to keep up with the advances in avian medicine and related subjects with which they presently need to be familiar and involved. We already have the example of the five veterinary surgeons who have been awarded Fellowship of the Australian College of Veterinary Scientists by examination in Avian Health. Whereas a broad understanding of the subject is considered a pre-requisite, the emphasis of the examinations for two of the people was on commercial poultry medicine etc; for one of the people on avian pathology, and for the other two, on Caged and Aviary bird medicine.

There are parallels in the experiences of those who are members of the Australian College of Veterinary Scientists by examination in avian medicine. And as an aside, I would encourage each person here who is not already involved with the College and who has more than a casual interest in birds to plan and seek membership of the College in Avian Medicine. Everyone is likely to benefit, you, the College, the Avian Chapter, your colleagues in general practice, your clients and last but not least the birds we strive to help.

Certainly I feel this pressure to strive to keep up and the conflict from not being able to do so to my satisfaction, very strongly now, and although by necessity I have (or have had when my memory appears to be inaccessible!) a general knowledge, for example, of ostriches, my tendency is to refer clients with problems with ostriches to others, when they are available, and to encourage their interests in them. Increasingly I am finding it more important to know from whom I can source information and to whom I should refer people, as more and more I am faced with the limitations of my own knowledge. That does not in any way mean to denigrate my own experience, knowledge and problem solving ability. Rather, it has become a "tool" that I increasingly use, particularly when someone rings from the other side of the Earth, Australia or wherever and obviously has no intention to support my time. However, I also use this "tool" wherever I consider it appropriate for my "bona fide" clients, ie when I consider it to be likely to be in their best interests.

So perhaps, as well as a trend towards specialisation, we are and will increasingly experience a trend to acting as components and facilitators of information transfer and data management. It seems that for many of us, computers, video cameras and remote sensing devices will play an increasingly important part in this life.

I sense inner warning signals that there is a need to balance this area of "growth" and "dependence" with "growth" in "spiritual awareness and codependence" which permeates throughout the breadth and depth of our lives.

Additional examples of the trend to and the opportunities for "specialisation".

These are often linked with seeking or striving for excellence, which may be in terms of simply bettering one's best or becoming "the best", "the authority". Sometimes the "ego" has less to do with things and it appears to be more a matter of being in the right place at the right time with the right people. (I use the word "appears" purposely, but then that may be another "matter"!)

Whereas Caged and Aviary Bird Medicine is probably the focus of most of us here, there is a trend and an increasing opportunity for individuals to break new horizons in the broader view of things. We have individuals doing just this in education of us, our colleagues, veterinary nurses, animal attendants, aviculturists etc. We have others developing expertise in the development and marketing of products to support avian medicine. We have a tendency to variously develop expertise in psittacine birds, racing pigeons, companion bird medicine, flock bird medicine, pet shop medicine, aviculture, nutrition, avian pathology (and divisions of this), theriogenology, avian behaviour, zoo and wildlife medicine, communication via the media (television, radio, newspapers etc), ostrich and emu farming and so on. Certainly I foresee increasing need and scope for and appreciation of and for those involved in the avian aspects of conservation biology. We live at a time of great opportunities and of great needs. I have already alluded to some of these, and I will allude to others in the attachments to the core of this paper, for example the future of aviculture.

Research

The future of avian medicine in Australia will and must demand ongoing research into more and more "problems" as more and more diseases are recognised in and introduced into Australia and need investigation, as the perceived value of both our captive populations and remnant free flying populations increases and as more species become threatened and endangered. I suspect that as members of the wider community better understand the roles of birds in our lives and the global ecology, as they better appreciate their nature and attributes and as other attitudes change funding of such research will be more forthcoming. (I can already hear some facetious comments in the audience as I write this!). There will be greater demands placed on avian pathologists and the need for more pathologists with expertise in various avian species. There is likely to be an explosion in the use and applications of DNA "finger-printing" as applied to both healthy and diseased birds and their normal and abnormal microflora/microfauna.

Diagnostic Aids

The increasing demand and expectation for "accurate diagnosis" and "sophisticated" medicine is already creating a demand for aids to diagnosis for a variety of diseases. These demands are being met by the development of micro-analysis technology, computer-aided and dependent technology and an increasing number of commercial diagnostic test kits. It is hoped by me at least, that we will have affordable amplified antigen dipstick tests, perhaps aligned on one strip as for eg a Combur-8 urinalysis test strip, for a variety of common avian pathogens considered relevant to, say, psittacine birds. Make up a suspension of faecal material, dilute and incubate it with the stick, and perhaps Bob's your answer! Similarly more disease specific tests will be developed for testing blood specimens. There may be a period when most of this testing is done in professional veterinary laboratories but as the costs of the technology reduce, increasing, a little more into our future, they will be performed "in house."

We might think about applications for remote scanning devices, computers, modems, smaller and more powerful computers, video cameras with macrophotography and microscopy facilities, affordable scanning electron microscopes, ultrasonography adapted to small birds, CAT scans and other developments which are at present available to our "cousins" in the medical profession but which are as yet unaffordable, "even by" our teaching faculties. Perhaps some of us will cease working every day in the practice but will be able to earn a crust helping others via computer-aided linkups.

Vaccines

Just as we have routine vaccination with annual check ups for pets of a proportion of our dog and cat owning population, so we will have vaccination of companion and aviary birds being increasingly commonplace.

Antimicrobial Therapy

DNA genetic engineering will play significant roles in changing much of current approach to therapy. Monoclonal antibodies, new specific antiviral agents, more active immunostimulants and more effective, safe probiotic preparations for competitive inhibition of pathogens will become commonplace. It is likely that we will routinely follow courses of broad spectrum antibiotics with an inoculum of "normal flora" which has been laboratory tested for all known pathogens etc.

Aviculture

The future of other aspects of avian medicine as far as we are concerned will also have much to do with the future of aviculture, changing attitudes towards the keeping of birds in cages, and again, an increasing awareness and appreciation of the "human nature of birds" which is likely to lead to both an increased value being applied to both wild and pet birds, international and interstate movement of birds and perhaps the management of quarantine stations, changing attitudes towards exotic diseases and non-indigenous species, the explosion in knowledge, and a whole host of factors affecting our "own" survival and quality of life.

As a result of these, most of us will be under pressure to adapt and grow into new areas of endeavour. Some will opt out of avian medicine, some will change direction, some will vacate the niches they occupy, but overall, I believe the future of avian medicine in Australia and that there is room for us all. I believe there is also the opportunity for each of us to become an "expert" in something to do with birds, the opportunity to "make a discovery", the opportunity to put pen to paper, appear on TV or whatever our forte, and perhaps last but not least the opportunity to use avian medicine to help "The Others" with whom we share this earth.

The Caged and Aviary and "Wild-Bird" Industry. Visions of Present and Future Opportunities for those who care for and about Birds. New Age Aviculture and the Bird Trade.

Many wonderful people in the industry

It is obvious that there are many ????? are involved in aviculture, who have been and are contributing very positively to conservation and to raising our community standards re bird care, ethics, etc. To those I say thank you. Take courage, become stronger and more vocal and get together with those of like mind. You have much work to do. Yet do not shun or consider yourself superior to those who have and still act contrary to your beliefs.

Changing attitudes and beliefs.

Remember the ageless wisdom "Judge not lest ye be judged". Also remember to see things in a wider context. You may consider your current behaviour and management of birds beyond reproach, but what of the past, what of other aspects of life, "separate from" our interests and involvement with birds and "bird people"? Have any of your beliefs and attitudes towards some aspect of your life changed since childhood? Have you changed any of your ways, not because of some man made law or threat of force or punishment, but from some inner prompting as you've gained greater understanding or your mind has become more open? Is it then likely that sometime in our future you and I will change some of the views

that we currently hold close to our heart (be they sometimes poles apart), some of the beliefs that we have not yet been prompted to question, some of the attitudes to life and people that we have not yet experienced from the other side? I think so!

Unintended offence.

So if I now happen to offend or antagonise some people please realise this is not a personal attack on you but rather a prompt for you to try to see things differently, from different perspectives.

A Global View.

Globally, environmentally and ecologically (and economically) the world is in crisis. Australia, since the settlement of Europeans, is thought to have sent more species to extinction in 200 years than any other country. Much of this is attributed to mismanagement of our fragile land and poor understanding of our environment. Forces in aviculture and the bird trade have contributed and are contributing to the demise of species ...perhaps we all have in some way, through our actions, beliefs and attitudes. (On the other hand there are those who are very actively working towards preventing the extinction of species through aviculture.)

Our Industry Must Change.

Much of aviculture and the bird trade as we know it now will and must change dramatically within the next 5-10 years.

Current and past practices.

Many practices and methods of dealing in and with birds acceptable in the past or condoned by insufficient opposition must be relegated to history, must be stopped, preferably by education and understanding, but with the support of the law where necessary. (Those laws will become more effective as the Australian public becomes aware and more abhorrent of some of the practices of the past and present, and actively co-operates and supports those who enforce the law.)

Global priorities, changing personal priorities.

I see preserving and conserving our global heritage to have priority over the desires of certain individuals to trade internationally in birds at this point in time, be it legally or illegally, when I believe there is rapidly growing evidence that such trade is mostly contributing to degradation of our Natural heritage.

We remain too ignorant to trade birds wisely.

I know that at this point in time scientists and aviculturists lack sufficient knowledge about birds and how to recognise and diagnose diseases being carried by them, to safely trade internationally. I know that many problems resulting from trading in the past have taken years to be recognised by us. The detrimental impact and significance of international bird trading may be obscure to most of us right now but will become more and more obvious as time passes. Perhaps unfortunately, not everyone has had the benefits of travelling overseas and contrasting their paucity of wild birds with what so many take for granted here, of having a deep felt empathy with nature, of having the opportunity to spend much time studying and learning about the web of life in physical and other terms. Yet, I doubt that you need any great amount of these experiences to still recognise that we can't continue to treat our environment and each other the ways of the past. We must change. The big questions come from HOW!

Essential reading.

I recommended that those who are serious about aviculture and/or trading in birds should make the effort to read relevant sections of a recently published book "Avian Medicine: Principles and Applications" edited by Ritchie, Harrison and Harrison. 1994. Wingers Publishing Inc. Post Office Box 6863, Lake Worth, Florida USA 33463-6863. The book numbers 1384 pages but perhaps reading just the prologue, some 7 pages, by Dr Robert Groskin, will give you some feeling and understanding, some clearer perspective. Yet I am tempted to slightly alter a quotation on the first page of this Prologue which reads "In the end we will conserve only what we love, we will love only what we understand, we will understand only what we are taught." Baba Dioum, Senegal. Being taught, by itself, is not enough. Those teachings must be in harmony with our inner feelings, our emotions, before we are likely to seriously question and re-evaluate previously unrecognised beliefs and attitudes. Take some time to think about it.

Talking of books, another well worth the read (so far I've only read the first chapter and scanned the remainder) is a new book "The Human Nature of Birds. A Scientific Discovery with Startling Implications." by Theodore Xenphon Barber, PH.D. 1993. Bookman Press, 325 Flinders Lane, Melbourne 3000.

So many conflicting viewpoints.

I have spent many long hours through day and night over the years pondering the conflicting "needs", "wants", "demands", "expectations", "practices", "creeds", of those involved with birds, not just aviculturists and bird dealers and traders, but a wide spectrum of members of the "general public". It seems that in essence there is a tremendous amount of ignorance about birds and disrespect for their needs, lack of thought about their quality of life and the value of their lives in the Web of Life.

Double standards aren't twice as good.

There is also an insidious double standard throughout the community, but especially among certain participants in the avicultural, bird trading and political communities, which perhaps I am naive enough to believe, cannot be tolerated for much longer. It is no news, and I believe justly so, that many regard this industry with which I have so many links, to be heavily tainted, to put it politely.

Foul (Fowl?) Play in the Bird Industry.

The industry constantly abounds with gossip, innuendo, wink-wink about smuggling, illicit trade locally, how to fool or trick or deceive some person or authority, how to beat this regulation or that, how to make some black money on the side.

Organised and Disorganised Crime.

There are some very "big bully" boys (and I presume girls) involved and at some levels of the organisation there appears to be very close links with organised crime, drugs, hitmen and more. Some veterinary surgeons have been rendered fearful of reporting illegal activities discovered during the course of business with such individuals, effectively silenced, for the moment. It is hard to take complaints and evidence high enough for effective action to be taken. Confidential information is frequently leaked before action can be taken, and yet when evidence is needed few have the guts to repeat in court the allegations previously made. "Hard evidence" has been hard to obtain. (However new technology is on our side!) It is common for birds, both cheap and expensive birds, to be traded without their true sources being known to the recipient. It is standard for much of this trade to be done without even the benefit of a white board! Certainly the wider community is cheated time and time again by certain people in the industry running lucrative "sideline" "pocket money" businesses trading in birds, with minimal tax paid, no records of money changing hands.

Disposal of Dead Birds.

Tell me if I am wrong, but I gather that it is still common practice to throw dead aviary birds in the bin or chuck them out somewhere where they won't smell too much where wild birds and other animals can feed on them. Few bother to find out why their birds died. Yet many still exhibit and trade in birds while they have outbreaks of infectious disease. How far will an introduced exotic disease spread through the industry before birds are taken to a vet capable of recognising it. And when that does happen who are going to be the losers? What price will they pay? Not just the price of an occasional necropsy! Whole aviaries of birds and years of breeding will be at risk of destruction. Yes, I can hear some whispering to themselves and their mates as they read this "all the more reason for not taking sick birds to the vet".

Disposal of unwanted birds (First choice?)

How many have already had the experience of buying some highly desired bird at a special price from a "mate", putting it in your aviary or collection and then losing a number of birds in the ensuing weeks totally much greater value than the bird purchased? Have you really thought why?

Disposal of Sick Birds

But let's think a bit more. I hear that sick birds and surplus unwanted "no value" birds, eg budgerigars are often killed by throwing them hard at the ground or by squashing them underfoot, ringing their necks or "simply" letting them go to be killed and eaten by the carnivores, eg Kookaburras, Butcher birds, Currawongs etc without the slightest thought or concern that we may introduce new agents of disease into these populations. How long will it take for megabacteria or polyomavirus to adapt to infect our native birds? Can anyone tell me? Can anyone be sure it won't happen? These and like actions are barely questioned by those who perpetrate them. We have others outside this industry who purposely poison, often very indiscriminately, large numbers of birds.

Bird trapping.

We have those in the industry who for years have been raiding nests and trapping wild birds to make a bob or two without a thought to their fate. We have those who are so irresponsible as to not only raid the nest but to chop down the hollow tree as well, as if there is an endless supply of nesting sites. It seems that for some of the trade, the fact that (mismanaged) birds die so quickly (once sufficient time has passed that they won't be blamed for selling a sick bird) is a bonus; people will come or go and buy another bird! More money! Thanks! (Another gullible fool!)

Selling infected and sick birds.

Think of all the bird dealers and pet shops who each year continue to sell to the naive unsuspecting public wild trapped cockatoos, galahs, corella etc either already showing clinical signs of or known to have been in contact with other birds showing signs of Psittacine Beak and Feather Disease and Psittacosis, smug in the attitude their customers bought buyer beware. How many advise customers to get birds checked by an avian veterinarian within 72 hours of purchase? How many bird dealers and people working in pet shops have either bothered to avail themselves of the opportunity to learn about obvious clinical signs which would immediately alert them to the probability of the birds being infected with these diseases? How many bother to physically check the powder downs of each sulphur crest, corella, galah they propose to offer for sale? How many have unrestrained birds wandering about their shops? How many mix different consignments of birds in the same cages?

Selling inappropriate cages, toys, medicines.

How many sell little and tall cylindrical cages? How many sell sandpaper sleeves to be fitted over perches? How many sell unsafe toys and mirrors with no protection on the rear? How many sell galvanised products which have not been adequately treated with vinegar and scrubbed with a wire brush? We could go on but then I'm not perfect either...eg I've been conned by misleading advertising and unsubstantiated product efficacy to selling products which have not lived up to our expectations. The important thing is to stop as soon as you detect your error.

Selling Nestlings to Ignorant People.

How many sell birds that have yet to learn how to crack seed, with no informed written instructions or precautions?

Many Pet Shops Are Improving.

But it would be wrong if I were to imply that all bird dealers and all pet shops were or are irresponsible, for they are not, just as it would be wrong to imply that all vets know a lot about birds, or that I know it all.

More or Less!

It is a strange fact of life that the more you think you know, the more you realise how much you have yet to learn and the more you question what you thought you knew! That certainly applies to me. What do you think?

Authority Does Not Always Equal Wisdom.

What Value Our Natural Heritage?

We have our highly educated persons in authority, consultants and advisers who have not been able to see that "controlled importation" with the "quarantine measures" and the associated expense would have little beneficial effect on smuggling and may have in fact increased demand for foreign birds and made it easier to "launder" them.

Then we have their blinkered priorities dominated and set by forceful groups within the agricultural and poultry industries, perhaps with the help of politicians with other interests, such that birds being imported legally were virtually only screened for diseases of currently recognised threat to the poultry industry.

Apparently both the avicultural industry and our natural heritage must be seen as worthless or not warranting more than cursory consideration?

Perhaps the bird trade has been super-efficient in hiding the value of their transactions from the taxman and the government?

How to Import Diseases Legally. (Send them through Spotswood?)

We know that more than 50% of the budgerigars in some legally imported consignments have been released from official quarantine infected with megabacteria, at least one macaw despite my warning has been released with the potentially disastrous (to our heritage) insidious "Macaw Wasting Disease" virus which by no means restricts itself to infecting macaws and there is much more that we have yet to document fully.

Insufficient Technology to Diagnose Diseases.

The differential diagnosis of Diseases of psittacine birds and the other birds imported (except perhaps poultry) is still in its infancy, especially when it comes to trying to diagnose them in live birds. Yet there is great hope that in another 5-10 years the situation will have changed dramatically. So at this point in time, and until we can screen birds reliably and economically for an extensive range of diseases which do or might pose a threat to our wildlife and established avicultural flocks, no further birds should be allowed into this country, legally or illegally. It is up to our Governments, with a lot of encouragement from those who care, to reverse the decision to allow birds and their eggs in through "quarantine".

Relaxing "Quarantine" is Abhorrent and Utterly Foolish.

The idea of further reducing the time in quarantine and letting in a greater number and variety of birds under present circumstances is abhorrent to anyone who really cares about Australia and understands the sensitive Web of life. It is even more abhorrent to those of us with hope or a vision of some alternative means of effectively reducing, perhaps stopping, smuggling.

Show You Care About Australia!

It is up to every individual who cares about Australia, who understands and can imagine a "better" society to strive towards promoting that care, that empathy, that responsibility. We need to work hard to bring on side those who, perhaps despite the sincerest and best of intentions and motives, are putting our heritage and all that we currently have, at so much risk. Unfortunately there will be those who want to continue to act illegally and those who will seek to benefit from those illegal activities. We simply must do everything possible to stop smuggling. This will mean overcoming or ignoring our fears of speaking out, of speaking up, of flushing out the smugglers, of ostracising them, of dobbing them in. This will involve much careful documentation and gathering of evidence. It will necessitate many changes to become effective, but there is a grass roots force growing to bring about these changes.

An Amnesty, A Moratorium?

Perhaps, just perhaps, the Government may give all those who have something to hide a short amnesty period to come clean, but after that it will need to be no holds barred to make the system work. If there is an amnesty it must immediately be followed by an enforced moratorium on the international trading of birds, subject to periodic review say every 5 years. This will be part of the price we all must pay for the ignorance of our past and the knowledge that we have learnt to help save the heritage of our generation and of future generations from extinction. Think about it! Please!

Smugglers and Their Cohorts.

Those in the community who have actively engaged in smuggling and those who are now the proud owners of species and varieties of birds or their progeny that have been illicitly smuggled into Australia can be viewed variously as criminals, an accessory to the crime, an ignorant mug or an innocent party depending on your perspective. No doubt most will initially judge themselves to be innocent parties. However, if they had any knowledge whatsoever about the birds being smuggled or derived from stock that was smuggled, they should think again.

Bird Theft.

Just how commonplace is theft of "privately owned" birds in Australia? How many valuable birds and/or their eggs have gone missing from zoos and fauna parks? Who has been the recipient of these birds and eggs? Have they remained in this country? Is there a lucrative trade in stolen birds and eggs to overseas markets?

Legal Importations O.K.? Think Again!

Then we have all those who have imported birds legally. Many of these people are well aware of many reasons given by people opposing the legal importation of birds. Obviously by their action of still proceeding to import the birds they must have either dismissed all the reasons given and/or put their personal emotions and needs above reason and our heritage. (Yes, no doubt there is a wealth of other conclusions that could be drawn, but let's move on). Perhaps they have not understood the implications of what they are doing, what they have done. Be it said by me, as prophesied by me and others, they have already introduced to this wonderful country of ours a variety of organisms which will impact upon our aviary and wild birds for eons. The probability that those smuggling birds in have done the same doesn't remove any burden; it compounds it.

They have not only compounded the problem in that sense, they have made it easier for the smugglers to launder "their" birds.

Our Society, Our Community, Must Share the Burden.

Let's not dump all the responsibility on aviculturists or bird traders or any other particular party. Everyone in the wider community has and has had an opportunity to be involved on one side or the other or both.

Largely through lack of understanding and appreciation of what has been happening, ignorance of the bird trade, our wider community has not felt the need to become involved. (Let sleeping dogs lie!). It is time the wider community to be well and truly woken.

Most International Trade in Birds Must Stop.

I hope to see a cessation of the international trade in birds except where it is part of an internationally organised effort with long term (many years of) quarantine to save endangered species from extinction. Unfortunately because there will always be some who will attempt to trade by smuggling or whatever means they see fit irrespective of the law or what's considered best for our community as a whole, it is rapidly becoming necessary to use the most up to date technology to help minimise that trade. Eventually education of the community will succeed but in the meantime regulations law enforcement, punishment and more will be needed.

Endangered Species.

Except in the context of saving endangered or threatened species or subspecies I advise people contemplating or planning to import birds or to trade them internationally to think again, again and again. Please try to understand those who appear to oppose you in this respect, and the reasons for their actions. Please think and ask yourself why you really want to import/export birds? Does the means justify the end? And what will be the fate of those birds? How many won't make it to wherever they're headed? Is that O.K.?

With a certain amount of tongue in cheek, for the zoo industry is not above question either, perhaps if you really want to care for, work with, look at exotic birds in Australia, become a "zoo keeper", ie get employment in one of our major "zoos".

The Future for Aviculture. It is not all doom and gloom!

Despite all that I've said above, I will now say that in the near future aviculture and the local bird trade will become far more important in many ways than it is now. There will be many opportunities. There will need to be more organisation and networking, much more cooperation, much more specialisation.

Much of the paper work necessary will be rapidly replaced by and simplified by computers as we move to an age when there will be a notebook computer somewhere handy to every aviary.

Birds as Pets.

The use of birds as pets has had a profound and permanent effect on the population of many free-ranging bird species. Yet the demand for birds as pets will increase dramatically.

The practice of keeping single birds as pets will increasingly be seen as inappropriate, inconsiderate of birds' needs. People will increasingly opt for keeping pairs of captive raised hand tame birds. The practice of keeping pet birds in tiny cages where they never have the opportunity to fly will also be relegated to the ignorant. Pet birds will increasingly become and be treated as members of the family, they will become more valuable to their "owners" or custodians. People selecting birds for pets will be better educated and more likely to discriminate in favour of professionally hand raised tame birds. As the general public review past attitudes towards birds and "bird-brains" ... as they learn that many birds are far smarter than they ever dreamed, as they learn that birds are very much individuals with complex personalities, more people will choose to share their life with them. Urbanisation, habitat destruction, changing attitudes towards (perhaps against) keeping cats and dogs, and their droppings, are all likely to contribute to a growing popularity of keeping birds as pets.

There will be many opportunities for new legal sideline businesses.

Breeding birds of suitable temperament. This will involve selecting birds that retain docility and other juvenile traits.. the challenge will be selecting birds for juvenile personality traits while keeping a fully functional "mature" immune system and a long genetic life expectancy. (Think about the future popularity of budgerigars if their life expectancy drops to 2 to 4 years with the continued importation of short-lived British Show birds.)

Will the industry become so specialised that it parallels the commercial poultry industry? Will there be breeders, hand raisers, people who specialise in teaching birds to talk? What about "toilet training"? I am sure some people will be prepared to pay a premium for "toilet-trained" birds.

Whereas vaccination of pet birds is presently in its infancy (perhaps "its pregnancy"!) this is likely to change soon and it will become common practice for pet birds to receive annual boosters and health checks.

All the above will move in the direction of raising the status of keeping birds and of making birds be recognised as more valuable.

Involvement with Free-Flying Birds

Ranching

My concept of ranching as it applies to birds is the selective helping of breeding of targeted free flying or roaming species (Eg. emus) and the taking of surplus-bred birds for commercial purposes by modifying either the natural environment to one of less diversity plant and animal species or by improving degraded environments (Eg. "monoculture environments") by increasing indigenous plant and animal diversity. It could also involve similar application to an established introduced feral species such as Indian Mynahs. (Surely you've already heard about the couple who've discovered the superb aphrodisiac properties peculiar to the eggs of the Australian strain of Indian Mynahs when prepared by a secret recipe? I don't know of anything better! Caviar? Eat your heart out! It's now just a matter of careful marketing of that special part! Think about the opportunity and the benefits to so many! I've learnt one thing about the recipe.. the most potent eggs are those that haven't been incubated!)

We are going to see many more people using ranching to contribute to their income. People on the land, with land will need to increasingly revolt against the traditional practice of monoculture. They will need to diversify their income base. There will become a need for "highly specialised" people who are also well-versed in land management and planning. I am thinking that there will arise a demand for emu specialists, black cockatoo specialists, brush -turkey specialists, bower bird specialists, lyre-bird specialists etc. There will be such an explosion of knowledge that without reference to computer bases these people will be needed to act as consultants and somehow be recognised for their contribution, Eg. be it by money or by the opportunity to become involved in projects requiring people with certain qualifications, aptitudes, or by facilitated opportunities to travel and study.

Harvesting

My understanding of the term harvesting as it is applied to wild birds is the taking of surplus birds from the natural environment in "good" seasons and perhaps also taking of those birds from clutches where the weaker or less developed nestlings normally die before fledging. When combined with affordable, as yet unavailable, reliable effective diagnostic technology, harvesting by "Third World" and "indigenous" peoples is likely to become a favoured option for encouraging the preservation of habitat and at the same time providing a source of income for the people working with Nature rather than competing against Nature. We are likely to see more examples of this in Australia within our life-times.

Poaching

Poaching to me means the theft of free flying birds, be it from public lands, National Parks and the community as custodians of Nature or from private lands.

Hunting

Hunting to me implies the stalking and killing of birds, often in the name of "sport". By it's very nature these days, except where it is the means of survival of indigenous peoples, hunting is usually a destructive process but there are circumstances where it may be applied to feral introduced species for the apparent betterment of other species and our environment. However we must be cautioned by our many experiences with duck hunting where environments have been contaminated and degraded for years with lead shot and where inebriated and other people fail to discriminate between "legal" and "illegal" or "protected" birds and animals. The situation is aggravated by ineffective policing by those given that responsibility.

Some people make a distinction between hunting free-ranging wildlife and hunting stocked species. If there is a place for either it will be the latter if it also involves the practice of harvesting from a previously degraded land and habitat preservation.

It is hoped that most traditional hunters will soon learn that there is more challenge and skill, more fun, less expense and much greater opportunity to hunt with a good camera or video and that what's more they can keep their trophies (even if they're a near miss, and they can also share them around. Perhaps they may even contribute to our knowledge of bird behaviour, diet preferences and much more.

Falconry is one of the oldest recreational uses of birds and increasingly we will see the knowledge of falconers being applied to captive-breeding programs and rehabilitation and reintroduction of raptors to the wild.

Rehabilitation of birds

This term means to me the process of rearing and caring for orphaned, injured, sick and malnourished

wild birds to a state of physical and emotional fitness where they have "nature's probability" of surviving when released back into the wild. The term also involves the process of helping those individuals complete the adjustment from captivity and dependence on us to self-sufficiency. Many more people will become involved in the rehabilitation of birds as a hobby and useful recreation. The authority of some trying to control and restrict members of the public from becoming involved without having studied and being accredited will be discredited by their own actions. However it is likely that voluntary rather than compulsory accreditation schemes will be established for people who want to become involved in the care and rehabilitation of rare and endangered and "difficult" species. It will be seen that it is neither appropriate to release or kill many incapacitated birds that can survive and breed in protected habitats. Aviculturists are likely to play their part in the management of these birds and their habitats.

Reintroduction of Birds

This term implies to me the process of conditioning, releasing and helping through to independence, specially captive bred, ranched and harvested birds to areas in which the species was known to occur but had locally become extinct or reached unsustainable small numbers. It is usually necessary that land management practices and the attitudes of local human communities be reviewed and changed in many of the areas concerned prior to reintroduction for it to succeed. Much research needs to be done now on many of our indigenous birds and other wild-life for us to be able to successfully reintroduce many to areas where they have become locally extinct. I ask each person to ascertain what role they can play in this process.

I foresee increasing opportunities for people to become involved with and help care for birds in what John Wamsley calls "Earth Sanctuaries", be they part of a growing number initiated by him and his associated or by others.

You might well ask yourself where your time, energy and resources will be best spent.

Indigenous, Introduced and Feral

The term "indigenous" defines a species, sub-species or type of animal, plant or other life-form which occurs or did occur naturally in a defined geographic area. The term "introduced" defines a species, sub-species or type of animal, plant or other life-form which historically did not inhabit a defined geographic area, but which now inhabits that area either in captivity or in the wild. The term "feral" variously means untamed, wild and is usually applied to introduced species.

Accreditation

The presumed and assumed right to keep birds irrespective of your experience, level of care, knowledge and facilities is likely to be challenged very soon and eventually, and not very far into the future, will become a privilege. People getting involved with aviculture will probably start with either a pair of pet birds or very common easily bred birds. If they want to progress to keeping other birds or breeding other birds then they may be required to demonstrate a defined level of proficiency in practical knowledge as well as theoretical knowledge of such terms as quarantine. They may need to demonstrate familiarity with an approved computer record keeping scheme the same as or compatible with those being developed for the zoo industry. I envisage it easier to become accredited to breed birds for the companion bird industry than for the reintroduction to restored habitat, for example. Perhaps, like so many things in life, there may be a "Grand-father clause" which enables accreditation and recognition of the practical expertise of people such as Les Clayton and Stan Sindell to name just two of many, without them having to be submitted to examination by their peers. What can you envisage?

Captive Breeding for Domestication of Companion Birds

This has already been mentioned and will involve selection pressure for docility and other juvenile characteristics being retained in adult birds. Such characteristics are likely to render the birds less "fit" to survive in the wild. There will, however, be much more margin for error in captive breeding for this purpose than for captive breeding for reintroduction to restored "wild habitats".

Captive Breeding for Rehabilitation and Reintroduction

This will require greater expertise and more elaborate facilities and flights than breeding for pets. Pressure will be needed to select for birds of "native" type in appearance function and behaviour. Such birds will need to be taught to forage or hunt for food as appropriate and to be wary of predators etc. They will need to be "hardy". It will be vitally important to maintain them free from exotic and introduced diseases. It will also be important to ensure their genetic diversity.

Species Management Programmes for Threatened and Endangered Species, Subspecies and Types

Some of these have already been established for some species of birds maintained in zoological "collections". We will see many more programmes established in the next few years. There will need to be increasing cooperation and shared responsibility between the "zoos" and accredited aviculturists.

"Community-Based Aviculture"

I haven't come up with a less cumbersome term but the concept I'm developing is for people in local communities to agree to protect tracts of land from introduced predators and to manage the land to provide a variety of nesting, roosting and feeding sites including vegetation in these areas and to supplementary feed, water and if/when necessary medicate these birds. These tracts of land may be small, large or anywhere in between; they may be public land, parks or may involve for example strips of land to the rear or front of adjoining properties. In due course (with wide spread underground power and fibre-optics communication systems) some nature strips may become as their name implies.

These tracts of land in time may become refuges for other indigenous animals, insects etc.

Let us remind ourselves that wisdom can be shown irrespective of who we are or who we think we are. I will quote a famous passage, one that is as relevant now as when it was written.

Let us remind ourselves once again that the Earth, the diversity of life of which we have become custodians, is precious, so very precious, and we need much wisdom and the ability to overcome our selfishness, our greed, to manage it wisely.

"The Earth is Precious"

How can you buy or sell the sky, the warmth of the land? The idea is strange to us.
If we do not own the freshness of the air and the sparkle of the water, how can you buy them?

All Sacred

Every part of the earth is sacred to my people. Every shining pine needle, every sandy shore, every mist in the dark woods, every clearing and humming insect is holy in the memory and experience of my people. The sap which courses through the trees carries the memories of the red man. The white man's dead forget the country of their birth when they go to walk among the stars. Our dead never forget this beautiful earth, for it is the mother of the red man. We are part of the earth and it is part of us. The perfumed flowers are our sisters; the deer, the horse, the great eagle, these are our brothers. The rocky crests, the juices in the meadows, the body heat of the pony, and man - all belong to the same family.

Not Easy

So when the Great Chief in Washington sends word that he wishes to buy our land, he asks much of us. The Great Chief sends word he will reserve us a place so that we can live comfortably to ourselves.

He will be our father and we will be his children. So we will consider your offer to buy our land.
But it will not be easy. For this land is sacred to us. This shining water that moves in the streams and rivers is not just water but the blood of our ancestors.
If we sell you land, you must remember that it is sacred, and you must teach your children that it is sacred and that each ghostly reflection in the clear water of the lakes tells of

events and memories in the life of my people. The water's murmur is the voice of my father's father.

Kindness

The rivers are our brothers, they quench our thirst. The rivers carry our canoes, and lead our children. If we sell you our land, you must remember, and teach your children, that the rivers are our brothers, and yours, and you must henceforth give the rivers the kindness you would give any brother.
We know that the white man does not understand our ways. One portion of land is the same to him as the next, for he is a stranger who comes in the night and takes from the land whatever he needs.

The earth is not his brother, but his enemy, and when he has conquered it, he moves on.
He leaves his father's graves behind, and he does not care. He kidnaps the earth from his children, and he does not care.
His father's grave, and his children's birthright, are forgotten. He treats his mother, the earth, and his brother, the sky, as things to be bought, plundered, sold like sheep or bright beads.

His appetite will devour the earth and leave behind only a desert.
I do not know. Our ways are different from your ways.
The sight of your cities pains the eyes of the red man. But perhaps it is because the red man is a savage and does not understand.
There is no quiet place in the white man's cities. No place to hear the unfurling of leaves in spring, or the rustle of an insect's wings.
But perhaps it is because I am a savage and do not understand.
The clatter only seems to insult the ears. And what is there to life if a man cannot hear the lonely cry of the whippoorwill or the arguments of the frogs around a pond at night? I am a red man and do not understand.
The Indian prefers the soft sound of the wind darting over the face of a pond, and the smell of the wind itself, cleaned by a midday rain. or scented with the pinion pine.

Precious

The air is precious to the red man, for all things share the same breath - the beast, the tree, the man, they all share the same breath.
The white man does not seem to notice the air he breathes. Like a man dying for many days, he is numb to the stench.
But if we sell you our land, you must remember that the air is precious to us, that the air shares its spirit with all the life it supports. The wind that gave our grandfather his first breath also received his last sigh.

And if we sell you our land, you must keep it apart and sacred, as a place where even the white man can go to taste the wind that is sweetened by the meadow's flowers.

One Condition

So we will consider your offer to buy our land. If we decide to accept, I will make one condition. The white men must treat the beasts of this land as his brothers.
I am a savage and I do not understand any other way.

I have seen a thousand rotting buffaloes on the prairie, left by the white man who shot them from a passing train.
I am a savage and I do not understand how the smoking iron horse can be more important than the buffalo that we kill only to stay alive.
What is man without the beasts? If all the beasts were gone, man would die from a great loneliness of spirit.
For whatever happens to the beasts, soon happens to man. All things are connected.

The Ashes

You must teach your children that the ground beneath their feet is the ashes of your grandfathers. So that they will respect the land, tell your children that the earth is rich with the lives of our kin.

Teach your children what we have taught our children, that the earth is our mother.
Whatever befalls the earth befalls the sons of the earth. If men spit upon the ground, they spit upon themselves.
This we know: The earth does not belong to man, man belongs to the earth. This we know.
All things are connected like the blood which unites our family. All things are connected.
Whatever befalls the earth befalls the sons of the earth. Man did not weave the web of life: he is merely a strand in it. Whatever he does to the web, he does to himself.

Even the white man, whose God walks and talks with him as friend to friend, cannot be exempt from the common destiny.
We may be brothers after all.
We shall see.

One thing we know, which the white man may one day discover - our God is the same God.
You may think now that you own Him as you wish to own our land; but you cannot. He is the God of man, and His compassion is equal for the red man and the white.
This earth is precious to Him, and to harm the earth is to heap contempt on its Creator.
The whites too shall pass; perhaps sooner than all other tribes. Contaminate your bed, and you will one night suffocate in your own waste.
But in your perishing you will shine brightly, fired by the strength of the God who brought you to this land and for some special purpose gave you dominion over this land and over the red man.

That destiny is a mystery to us, for we do not understand when the buffalo are all slaughtered, the wild horse are tamed, the secret corners of the forest heavy with scent of many men, and the view of the ripe hills blotted by talking wires.

Where is the thicket? Gone.
Where is the eagle? Gone.
The end of living and the beginning of survival.

In 1854 the "Great White Chief" in Washington made an offer for a large area of Indian land and promised a "reservation: for the Indian people.
Chief Seattle's reply, published here in full, has been described as the most beautiful and profound statement on the environment ever made.

I also take this opportunity to abstract parts of a paper titled "Australian Parrots - Breeding with Purpose, by Peter Stuckey, a physiotherapist at Berkeley Vale, and aviculturist, to fellow aviculturists.

"For millennia, humans have been charmed and intrigued by the beauty, intelligence and companionability of parrots.

Asiatic parrots like Plumheads, Alexandrines and Ring-necks feature in Egyptian culture of 5000 years ago, Greek and Roman culture at the time of Aristotles and Alexander 2500 years ago and Indian and other Asian cultures 3000 years ago. In fact, of the 64 practices men must master according to the Kama Sutra, one was teaching a parrot to speak.

Neotropical parrots have been integral to all aspects of life of many of the indigenous people of South America - from the pedestals of religious reverence to a place in the cooking pot!

Similarly, in the lives of our own Koori culture, parrots have featured from dinnertime to dreamtime.

Across all cultures sharing their environs with parrots, a symbiotic relationship has developed between humans and parrots. The primarily parasitic relationship has seen humans generally being beneficiaries.

The history of the European relationship with Australian parrots is no different.

From the first sighting (which may have been of the White-tailed Black Cockatoo by the Portuguese as early as the 1500's) to the evolution of European-based aviculture in this country, the balance of benefits has fallen heavily towards humans.

Initially, the relationship was one of observations and admiration. It quickly became more parasitic as parrots were trapped or shot and stuffed and sent back to museums in the mother lands. This was followed by the trapped birds being sent back live to birdkeepers in Europe. The first bird to survive the journey was the Sulphur-crested Cockatoo, the second a Rainbow Lorikeet.

This practice continued for decades. As Australia's population grew, the demand for parrots became greater and the practices of trappers and collectors became more excessive. This shifted the relationship to one of syneresis, ie both parrots and parrot keepers suffered.

Parrots suffered as their populations were plundered and their nest sites destroyed; parrot keepers suffered as their excesses earned them a reputation for greed and unscrupulous exploitation. Aviculturists carry the burden of this tag even today making it difficult to gain credibility with those whose legislation so directly affects us.

Parrot keepers gradually became parrot breeders. Trapping declined and aviculture began to emerge from bird collecting to keeping. The relationship changed subtly to become more commensal, ie aviculturists benefited and the remaining populations of Australian parrots remained relatively unharmed.

The boom in the breeding of mutations has seen a re-emergence of the parasitic relationship as aviculturists benefit in dollar terms but the avicultural population of parrots suffering through loss of genetic integrity.

In the face of this strong trend (and perhaps because of it), another facet is emerging in the evolution of aviculture - that of breeding for the preservation and conservation (of parrots). This relationship is mutualistic, ie both aviculturists and parrots benefit from it. An interesting characteristic of mutualism is that often neither group can exist without the other.

This, I believe, is the best future course and provides aviculturists with direction and purpose."

"Practise without a purpose is pointless and will ultimately perish. For aviculture to have a future it must - you must - have a purpose.

Never before has aviculture been under such a threat from so many sources. You know too well the sources of those threats - Government, Federal, State and local all have legislation designed to limit and restrict (perhaps terminate) avicultural practice. There are any number of fringe green groups filled with well meaning but misguided people - people who are well organised and have the ear of media and so the politicians, people who want to see prohibition of keeping of any creatures in captivity - better dead than bred in captivity!

Anti-avicultural pressure from such groups is enormous and growing but is not, in my opinion, the major threat to our keeping of Australian parrots. The major threat comes from within, Aviculture is permeated by apathy, misplaced self-assuredness and blinkered short-sightedness.

The underlying attitude is that as long as I have birds in my backyard, everything will be OK. Forget the future. Aviculture has no purpose or direction and so little appeal to young people.

Consider your particular society (the Parrot Society of Australia). From a species management perspective, it is probably a disaster. Predominantly males at the end of or beyond effective breeding age, few females and fewer young to carry on. Plenty of outside and aggressive competition - such a species has little chance of survival -

aviculturists are such a species.

Should your aviculture have a purpose? Emphatically yes it must!

What should that purpose be? The primary purpose is simple - to breed quality birds in quantity. Not a startling proposition in itself. It is, in fact, what we all aim to achieve. One must ask then, why so few of us actually achieve this end.

In a study of NSW National Parks and Wildlife Service (NPWS) figures on parrot registration, breeding in 1987 and 1992, the Conservation and Species Management Committee of the Parrot Society of Australia (NSW) and the Associated Birdkeepers and Traders (ABT) calculated a 'breeder-keeper ratio on figures of parrots kept and bred in NSW in those years.' The ratio is calculated thus: No. of breeders of a species divided by No. of keepers of a species expressed as a percentage.

"On the 1987 figures, this ratio was 21.9%, ie for every five people keeping a species, only a little over one person breeds that species.

By 1992 figures, this ratio had increased to 29.09%, ie almost one in three keepers of a species bred that species.

These figures are based on NSW NPWS data. It is generally accepted that one in three NSW aviculturists is registered with NPWS, therefore the figures are incomplete. The ratio cannot be regarded as an exact figure however the trends revealed are valid and worthy of discussion.

Whilst there is a greater proportion of chicks raised in aviculture, breeding is, I believe, unacceptably low. It begs the question of how we can more effectively breed the Australian parrots in our care?

The answer, I believe, lies in better understanding of their needs, physical and psycho-social."

Peter then proceeds to discuss and illustrate their needs, physical and psycho-social, in an instructive informative manner, and his communication is well worth the read.

Perhaps of the many things we can learn from Peter, those most applicable to us in the short term relate to us making and taking the time, having the interest and making the effort to prepare ourselves to be in a position where we can authoritatively advise and help our aviculturists. On another level, there is hope, yet!