



What is the biggest threat to our hobby?

There is much discussion in our hobby about the threat to bird keeping from animal rights activists and even new government regulations. These are real issues and must be addressed. But premature deaths, poor breeding and diseases are probably the biggest issues.

You may well be one of those bird keepers who gets disheartened by poor breeding results. There is little fun in going to the bird room expecting to find dead adults or chicks. The fear of being struck by one of the major disease outbreaks around the world makes the whole situation even worse. Such feelings are a major reason why newcomers in particular are leaving our hobby in droves.

But there are simple things we can do to substantially reduce the risks and make our hobby far more rewarding. This news sheet will help understand how. But before that let us review the worst of the disease issues currently around the world.

A worldwide problem?

America has a major outbreak of Newcastle disease (paramyxovirus) in California. This is restricted to the poultry industry and illegal fighting cocks (where it originated). Millions of birds have been slaughtered. Although no cage birds are affected all cage bird sales have been closed

for nearly a year now! Bird shows continue but with substantially reduced entries. The infection has crossed state borders into Nevada, Arizona and Texas.

In the Eastern seaboard of America there are frequent reports of West Nile Virus in birds. This can also affect humans. The virus is spreading westward to the great alarm of many bird keepers.

There are simple things we can do to substantially reduce the risks and make our hobby far more rewarding

Early this year Holland had an outbreak of Avian Flu. Again strict slaughter policies have been imposed (much like the UK's foot and mouth control programmes). The UK and other countries have applied import bans of poultry products from the country.

This outbreak has crossed the borders into Germany and Belgium. Again cage bird owners are being affected indirectly. Show organisers are banning people from attending shows if they come from certain areas or if they have any outside aviaries or they keep waterfowl or poultry.

The UK's mystery budgerigar disease has now been confirmed as a paramyxovirus though the exact strain was not identified at the time of writing this. Mortality rates of between 45% and 95% are common amongst affected flocks. The Budgerigar Society has cancelled all patronage shows for 2003 and recommended members not to attend shows and sales where infections may be spread.

China seems to have regular outbreaks of avian flu causing mass slaughters and export bans.

Other endemic diseases

Our cage birds are now affected by a variety of diseases - mostly viral in nature.

The problem with viral diseases is that there are no practical ways of treating them. Viruses use their host's cells to reproduce themselves. So to stop viral reproduction we effectively have to kill the host cells and so kill the host. This is why we have never found a cure to the common cold, flu, HIV, hepatitis etc etc.

On this logic all viruses would be fatal and clearly that is not true. All animals and plants have developed methods for dealing with viruses and this is one of the prime jobs of the immune system. The immune system works in many different ways using different weapons as the infection progresses. So many animals and birds can recover from viral diseases if given enough support. However this is not always true. Mortality rates of PDS and psittacine beak and feather are certainly very high as they are with human diseases like HIV-AIDS.

But mostly we recover from viral infections. This issue of Birdcare News is devoted to advising you on the very positive things you can do to help your birds cope with both the minor and major infections they are likely to encounter.

THE BIRDCARE COMPANY

21-22 Spring Mill Industrial Estate
Avening Road, Nailsworth, Glos.
GL6 0BS, England.

Tel: 0845 130 8600 (local call from UK phones)

E-mail: advice@BirdcareCo.com

Websites:

www.BirdcareCo.com
www.BirdVetOnline.com



Dealing with viruses and other infections

In the absence of vaccines there are really only three ways to effectively deal with viral diseases - good hygiene, good bio-security and effective support for the bird's own immune system. Fortunately these same issues make sense for other infectious germs and they even contribute to improved breeding performance. So they make sense anyway.

Bio-security

In the current climate of fear I will deal with bio-security first. This is all about keeping nasty germs away from your flock. We were all given a lesson in this on our televisions during the foot and mouth epidemic.

1. Avoid going anywhere where you may come into contact with dangerous germs. This means avoiding bird shows, sales and club meetings.
2. If you do go somewhere where any infection risk occurs take sensible precautions. Change into clean clothes before you go and certainly don't wear any clothes you have worn near your birds. When you return home change again and wash the clothes you have been wearing.
3. Make sure you and your clothes are clean before you visit your birds. Consider a disinfectant foot bath outside your bird room. Make sure your disinfectant kills viruses as well as bacteria and will remain active for a long time. Most disinfectants are only active for a few hours after diluting with water. **Avisafe** is strongly recommended and used by many vets.
4. Disinfect your hands between everything

Why antibiotics don't work on viruses

Bacteria, yeasts and fungi are all totally self-contained germs. They are able to reproduce themselves without help from outside (except, of course, for nutrition).

Antibiotics generally work by disrupting processes in germ cells that are done differently in animal and bird cells. So they don't have serious consequences for the host.

Viruses are different. They are simply a piece of genetic code surrounded by some proteins. They have no ability to reproduce themselves. What they do is inject themselves into a host cell and trick that cell into making more viruses. So anything that disrupts the virus reproduction also disrupts all the cells in the body. This is why we find it very hard to treat viral diseases. Vets and doctors are largely powerless to do any more than help alleviate symptoms.

In our drug-oriented culture we are only just beginning to recognise the power of the body's immune system. A few enlightened vets are also recognising this.

you handle with a hand scrub that has broad spectrum activity such as **Avisafe Alcohol Hand Scrub**. This product air dries quite quickly after application so is not time consuming to use.

5. Use a water sanitiser in all drinking water. Water is a major cause of spreading diseases between cages. **Aviclens** is designed for use with birds and has been proven by thousands of bird keepers over many years.
6. If you have infected or suspect birds isolate them from the rest of your flock. Always feed the healthy birds first and change and wash clothes immediately you leave any infected birds.
7. Do not wash feeders and drinkers from healthy and infected birds in the same washing-up water. Use a combined disinfectant/cleaner to wash all cages and utensils such as **Avisafe**.
8. If you do buy new birds in then follow strict quarantine procedures (see box page 4).

Hygiene

It would be easy to say that the right thing to do is to keep everything in your bird room spotlessly clean and sterile. Your birds would never be exposed to germs and so they would never get ill. Of course this is Utopia and not practical. This is not necessarily the best advice either as the immune system needs to be challenged to work most efficiently.

However, if your birds are at risk strict hygiene is essential. Baby birds (especially hand reared ones) do not have well developed immune systems so they need extra special care. Ensuring that feed and water containers are cleaned properly and that cages are routinely disinfected is simple sound advice. The really important factor to consider is whether your disinfectant kills a broad spectrum of germs. Many only kill bacteria and yet, as pointed out earlier, we have already discovered that viruses are a major threat. Don't forget the risk from yeasts and fungi too.

Avisafe is effective against viruses, yeasts, fungi and bacteria. It is also an excellent cleaner so is great for removing bird droppings from cages and perches. It can be used as a washing-up liquid or sprayed onto cage walls and perches and left to dry. There is no need to remove birds from the cages.

The most attractive features of **Avisafe** are its pleasant smell and economy. Because it stays active in water for up to six months most people dilute it in a spray bottle and apply it that way. This uses far less disinfectant than the usual cloth and bucket technique.

The immune system

This is probably the most important weapon we have against viral and other infections. Sadly it is probably the least recognised option in aviculture. The immune system is working all the time to protect you and your bird from invading

Sorry - very few product names

The topics covered by this newsletter are important to the future of bird keeping, the welfare of birds and the survival of some highly endangered species. Unfortunately the Veterinary Medicines Regulations prohibit us from linking our products with any medicinal effects unless we pay absurd amounts of money to license them. The definition of medicinal claims includes using words like dose, treat, prevent, boost and stimulate that are all in common use.

So, with the exception of disinfectants, you will not find product names in here.

The products we recommend to keep your birds in good health and for emergency first-aid are all standard items in our range. **Please contact us for advice. It is free and with no obligation.**

See front page for contact details.

organisms. To describe it as a single 'system' is something of an oversimplification. It actually works at a number of different levels.

Your birds first line of defence is its skin and the membranes that line the surfaces of the gut and respiratory tract (a sort of internal skin). Apart from being a barrier the cells in these surfaces produce chemicals that kill many germs. Natural anti-biotics if you like.

For cell membranes to function effectively they need an adequate supply of vitamin A. Since dry seeds contain virtually no vitamin A it is not surprising that the immune system of many cage and aviary birds is not very effective!

The vast majority of germs and many toxic chemicals should be cut off by this first line of defence. However some get in through cuts or simply overwhelm the system.

The second line of defence is the white blood cells. There are lots of different white blood cells and they operate in many different ways. To simplify the subject I will briefly describe three mechanisms.

In the first attack white blood cells literally surround and devour the invading germs. This is really easy to understand though the mechanism by which the invader is recognised is very complex.

The battle becomes much more difficult when the invading germs have entered your bird's cells. Viruses use the host's cells to multiply. At this point the host cells themselves have to be destroyed by white cells. This is the stage in your common cold when you, not surprisingly, have a very sore throat. It may hurt but this sore throat is evidence that your immune system is engaged in the battle.



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 (local call from UK phones)
E-mail: advice@BirdcareCo.com
Web sites: www.BirdcareCo.com
www.BirdVetOnline.com

At the third level yet other types of white cells produce antibodies. These are proteins that lock onto the germs and prevent them from invading the host's cells. These are the equivalent of 'smart bombs'.

Unless the immune system has been invaded by the same germ before, the design, development and production of antibodies takes time as each new germ needs a tailor-made solution. Once an antibody has been produced its design is stored away in another type of white cells. Amazingly the body may only retain three cells amongst trillions with each magic formulation in it but, when the same germ strikes again the production of antibodies is rapid and effective. This is the principle behind vaccination. Unfortunately the development and licensing of vaccines is extremely expensive so only a few bird diseases have been covered. No cage bird vaccines are licensed in the UK.

One key issue about immunity is that the system needs to be challenged regularly for it to function efficiently. This is why birds kept in totally sterile environments are very vulnerable to contact with other birds from less hygienic aviaries. So hygiene is a balancing act. Too clean is bad. Too dirty is bad!

Supporting the immune system

So what can we do to enable our birds to mount an effective immune response when faced with a germ invasion?

The first thing is to get the fundamental nutrition right. Birds that are vitamin and mineral deficient simply cannot respond effectively. Their cell walls will be poorly formed and they cannot repel invaders or fight back rapidly. Producing billions of white cells in a short period of time will be impossible.

Sadly, through lack of knowledge, most cage and aviary birds around the world are not fed satisfactory diets. Research in America suggests that the number of malnourished birds is as high as 98%! Bird vets will tell you that 90% of the cases they see have malnutrition as the basis of their illness. This does not mean that bird keepers don't care, it simply highlights the lack of good information available.

Secondly we can help by minimising stress. Stress reduces the immune response. This can be caused by poor housing, moulting, breeding, poor



Our supplements help the endangered Bali Starling to breed in UK aviaries. Photo: Tony

nutrition (again), overcrowding, changes in housing or companionship, over exposure to germs and a host of other factors. Visiting shows and other travel related issues often create stress for birds.

It is commonly reported that many drugs depress the immune response. So care should always be taken when considering whether drugs or immune support are the best options.

The biggest problem with stress is that it feeds on itself. A stressed bird gets ill. Illness causes stress. It is not surprising that some birds die so quickly!

Many wild animals are capable of treating themselves when they get ill. Somehow they are able to identify plants and other materials that help them feel better. Many of these are plants that, if eaten in large quantities, would be poisonous to the animal. However in moderation they hurt the germs more than the host. People who want to read more about this should read 'Wild Health' by Cindy Engel.

Unfortunately our captive birds are unlikely to have the freedom of choice and food selection to respond to sickness in this way. We could respond to sickness in our birds by using appropriate herbs but this requires excellent stockmanship (to detect the problem early) and a detailed knowledge of herbal medicine. However by carefully selecting safe herbs The Birdcare Company is able to give natural support to birds as part of their regular diet. These herbs can prevent some specific diseases, support the digestive system (prebiotics) and help the immune system. We incorporate



some of these ingredients into our regular use products as a matter of course.

You have read an enormous amount about white blood cells in this newsletter. For them to have a powerful impact on disease they need to be produced in their billions in a very short period of time. Each cell has to be complete so all the raw materials required for cell production must be available in adequate quantities. Partly we are back to the basic nutrition story again. More importantly each new cell needs a complete compliment of genetic material. This can very quickly get into short supply especially when the bird is under infectious attack. So, when birds get infectious diseases, we recommend products with extra quantities of these key ingredients. We call this our 'white cell support system'.

The Birdcare Company is one of the world's innovators in the provision of immune system support. No other bird supplements manufacturer, anywhere in the world, can give you the same level of assistance.

The table below gives you an idea of the ingredients that may be helpful in cases where particular symptoms are apparent. We have selected the issues that are the most commonly reported to our help line or Internet advice services. It should go without saying, but we will say it anyway, that these ingredients are *in addition to* a diet containing adequate levels of vitamins, trace minerals, limiting amino acids and calcium.

Symptoms

Useful ingredients

Diarrhoea (left untreated this quickly leads to death)

Probiotics, prebiotic herbs, electrolytes, long term energy, vitamins

Polyuria (lots of watery urine in droppings can be a sign of serious illness)

Consult an avian vet for diagnosis

General fluffed appearance (often the first sign of a sick bird)

Probiotics, prebiotic herbs, electrolytes, long term energy, 'white cell support', immune support herbs, vitamins, trace minerals and calcium

'Going light' in young canaries, finches, poultry, pigeons and doves (youngsters die at 8-16 weeks)

Anti-coccidial herbs, anti-coccidial drugs. *Prevention is better than cure!*

Obesity or liver damage (leads to poor fertility and premature death)

Limiting amino acids

Fits, poor co-ordination, aggression, fear, behavioural problems (unhappy birds often sold frequently)

Calcium

Feather plucking and mutilation (most commonly nutritional in origin)

Limiting amino acids, probiotics, calcium

Respiratory infections (very difficult to treat even with drugs)

Specially selected herbs, herbal immune support, 'white cell support', vitamins, trace minerals and calcium

Breeding problems

Protein, limiting amino acids, vitamins, trace minerals, calcium, probiotics

The current UK budgie problem

THE BIRDCARE COMPANY
looking after birds' health since 1994

In late 2002 about ten British budgie studs were struck with an 'unknown disease'. The cases stopped in January 2003 but re-appeared in the midlands and the North East in mid year. Some 15-20 flocks are reported to be affected in this area. There may be many more. Despite the original theories it appears that the disease may have originated in the UK in spring 2002 and been spread more widely through a few pet shops.

We now know that this is a paramyxovirus. What we don't know is whether exactly what strain it is. Further tests are being carried out to determine this. It is unlikely that there will be a vaccine available.

Paramyxovirus is not a new illness in budgerigars. The most recent UK outbreak occurred in 1993 but only a very few flocks were affected. In the 1970s it had been quite devastating in Japan. This latest outbreak has had a particularly big impact because mortality rates have been very high. We do not know if this means that the virus is more virulent or if

Quarantine procedures

Most British budgerigar breeders have stopped buying in new birds while the paramyxovirus problem is resolved. However, while other species are not involved and the trade in birds continues, it is wise for bird keepers to improve on their quarantine procedures.

- * New birds should be kept completely separate from your existing flock.
- * They should be given extra immune, digestive and energy support with a suitably designed product.
- * You should never go from the new birds to the old without changing clothing and carefully disinfecting your hands.
- * Maintain strict hygiene for your quarantine birds (Avisafe).
- * Carefully change them onto the diet you prefer with appropriate immune and digestive support nutrients and nutrines. Consult with The Birdcare Company if you need any advice.
- * You may consider drug treatments which will vary from species to species. Discuss this with your avian vet or other knowledgeable person.
- * Keep these birds separate for at least a month. If any get sick consult your avian vet.
- * Before introducing them to your flock consider bringing a single bird from your existing flock and putting it with the newcomers for a couple of weeks. If this bird gets ill or the new arrivals get ill you will be alerted to a problem without jeopardising your whole collection.

husbandry methods in the studs affected are particularly poor.

Symptoms

Some victims seem to die with no apparent symptoms, others get fluffed up, many get diarrhoea and some vomit. A few exhibit tremors and head twisting which seems to be associated with brain changes that are detectable with detailed pathological study.

Once symptoms are seen almost all patients seem to die, though one vet commented to me that 'budgie breeders were not renowned for their nursing abilities' and suggested that treating the diarrhoea with good re-hydration therapy and providing immune support may help many to make a recovery. At The Birdcare Company we regard this approach as fundamental to any illness involving diarrhoea so it is dealt with in our basic 'sick bird products'.

Flock mortalities seem to range from 45% to 95%. This large range suggests that different husbandry methods (nutrition and hygiene?) are having a significant impact. Can we get it down to 25% with further improvements?

Although we do not have information for this particular outbreak the literature suggests that paramyxoviruses do produce a good immune response. Birds that have been infected will have a good antibody count. So birds that survive infection are very unlikely to get ill from this disease in future.

But will these birds simply infect others? The evidence from pigeons is that they clear the virus from their systems after about one month. In chickens it is 1-2 months though occasionally 12 months. So the disease may not have the long term effects everyone currently fears.

Control

The Budgerigar Society are to be commended on their current strategy which is to isolate all affected studs, encourage good hygiene and hope that the epidemic can be contained. In support of this they are encouraging their members to avoid contact with each other and have discouraged all budgie classes at bird shows. They have cancelled their own show in November.

Good hygiene is a central part of their recommendations. Hopefully this will work. If it fails the hobby will have to try other methods and we believe that the immune support processes we have discussed in this newsletter are the ones most likely to produce a positive outcome for individual



studs and the hobby as a whole.

Why budgies?

Sadly the budgerigar fancy is the section of the hobby that seems to have more people who actively campaign against good nutrition practice than any other. It is also our experience that Budgie breeders seem to put hygiene far lower down their priority lists than most other bird keepers do. Many stock flights are severely overcrowded. Is this why they have been the branch of our hobby most affected by major disease outbreaks like megabacteria and paramyxovirus?

It has not escaped our notice that one of the high profile studs that was devastated last year belongs to a major anti-supplements writer for Cage & Aviary Birds.

We are not aware that any Birdcare Company customers have been involved in this outbreak as yet. Is this good luck or good sense on behalf of our customers?

A few years ago the budgerigar world was under imminent threat from another disease - megabacteria (now more accurately known as Avian Gastric Yeast). In this case drug treatments were available but none were 100% effective. Some studs chose to treat all their birds with an appropriate drug. However the disease nearly always returned so many repeated the treatment as a matter of routine. Others decided to allow the disease to take its course through the stud. The flocks that followed this second strategy have now built up a natural immunity to the illness. Current veterinary advice is to treat symptomatic individuals and otherwise allow the flock to become immune. **In the long term boosting immunity was the best strategy for megabacteria!**

Clearly we cannot be sure that this will work with paramyxovirus but, combined with the generally good immune response reported to this type of virus, it is very likely that the natural immune approach is likely to be most successful in the long term.

I would like to thank Dr John Baker (veterinary consultant to the Budgerigar Society) for the help he has provided in the production of this article. The information was up-to-date at the time of writing in the middle of June 2003.