

Overcrowding

by Jamie Wright

As the owner of a small bird room, I have been interested in the issue of overcrowding in an effort to ensure my birds are kept as happy as possible, but also as a means of keeping stress levels down and disease to a minimum.

Controlling the number of birds retained is a constant area of surveillance, but there's more to it than just counting heads.

Overcrowding occurs when the density of a population is greater than the ability of the space to meet the needs of the individuals that inhabit it. The capability to support may be the **physical space** available, or the **requirement for resources** such as food and water.

When I consider the wild budgerigar, and its nomadic tendencies, it is clear that overcrowding is not necessarily an issue in the wild. When food is plentiful, budgerigars can congregate in large flocks of thousands as smaller flocks converge together to form vast numbers. This allows new pair bonds to occur (creating genetic diversity) and breeding commences, but only when it is supported by plentiful resources. Generally this is the availability of food and water in plentiful supply, but there is also the requirement for adequate roosting sites and breeding sites. Fortunately, the Australian bush can offer an abundance of trees!

However, as the available resources (food and water) become scarce, the flocks break into smaller groups and disperse to find more plentiful supplies. Because they are not confined they can leave, and because wild budgerigars don't have strict geographic boundaries (other than where the land meets the ocean!) they can forage far and wide. These nomadic tendencies can reduce competition for resources in a single area. The lower competition this creates means there is less aggression typically displayed in wild flocks. Perhaps the most obvious area of aggression in budgerigars is seen in hens needing to secure and defend a single nesting site. Because there are a finite number of these, it pays to be aggressive if you want to hang on to the 'room with a view'.

Where overcrowding occurs in a natural habitat it can result in the depletion of resources, creating competition, which results in aggression between individuals or groups. An experiment of particular relevance was done in 1947 by John B. Calhoun in Maryland, USA. He created a "Mortality-Inhibiting Environment for Mice", which was a 101-inch square cage for mice with food and water replenished to support any increase in population. It was designed to test the limits of overcrowding, and because it provided sufficient food and water to support the population he could measure the other impacts of overcrowding. In this experiment, population peaked at 2,200 mice and thereafter exhibited a variety of abnormal, often destructive behaviors. By the 600th day, the population was on its way to extinction.

Why? They had enough food didn't they?

Some of the behavioural problems that occurred in the experiment included:

- Females unable to carry pregnancy to full term or to survive delivery of their litters if they did;
- A large number, after successfully giving birth, fell short in their maternal functions;
- Among the males the behaviour disturbances ranged from sexual deviation to cannibalism and from frenetic over-activity (hyperactivity) to a pathological withdrawal (sluggish & shy).

If you're looking for a population to breed, and they have developed abnormal behaviors as a result of overcrowding, the reality is that even when they have their required resources restored it may be too late.

Feeding inches

When it comes to our domesticated budgerigars, we look to meet all their food and water requirements. Mine get a wonderful selection of seeds, fruits, vegetables, vitamins and minerals on a regular basis. But just providing it is not enough. In the beginning I provided only one feeding station for their seed and it was always filled to the brim. You can understand my confusion when my birds began to lose weight and their feathers became dull. The problem was not the amount of food offered, but how easily they could access it.

I now provide a number of feeding stations, where the birds can spread out, as they appear to eat best when they can eat together.

Where limited access to a food or water source occurs it will result in the establishment of hierarchical behaviours. This is where the strongest and most aggressive birds will feed first and for the longest. Birds that are shy, introverted or passive are pushed to the back and may eat very little. In exhibition budgerigars, those with directional feathering tend to be overcome by birds without it, just because they are unable to see all adversities. Given the birds with directional feathering can be the better ones for exhibition purposes, there is risk that your best birds may be the most impacted by limited access.

The aggression displayed in the competition for food and water can resemble that which is usually reserved for defending nesting sites, so it can result in injuries.

While it's a guide only, here are a few tips I've picked up to overcome overcrowding for food and water:

1. Provide a multitude of feeding stations. Some may be for seed, others soft food, fruit or vegetables. Spreading these out allows all birds access to some sort of feed. I often note a rotation in place where birds will move from one to another;
2. Use square or rectangular feeding stations as it allows the greatest number of birds to attend to feeding;
3. Provide space around the feeding station so birds can comfortably enter and exit without having to fight their way in or out;
4. Be creative in utilizing the space in your aviary. You can hang things from the ceiling on a chain with a bulldog clip attached if you're running out of floor space;

5. Watch your birds regularly at feeding times to ensure your system is working. The number of birds fluctuates as we move into and out of the breeding season, and so too the requirement for accessing food and water resources will change over the course of a year;
6. Keep birds to a manageable number. Deliberately overcrowding because you can't be bothered doing a cull is just irresponsible and inviting problems;

Perching

Inadequate perching space does not allow your birds to relax, preen themselves properly, establish friendships, or practice courtship. A failure to provide adequate room for them to develop normal behaviours often results in the establishment of **abnormal** behaviours!

Going back to the wild budgerigar, perching provides safety. Those that can secure the highest perches with the best vantage points have a better chance of seeing danger approaching, and escape. And don't worry, your Champion of Show will be just as interested in demonstrating this behavior so it's not limited to wild flocks only.

Secondly, confining a wild flock to a limited number of perching spaces increases the success for predators. If only three trees existed in a 10 square acre area, and all budgerigars perched on these three trees, it would not be difficult for predators to identify the opportunity and ultimately increase their chance of success. Therefore, spreading out, but remaining in earshot of each other, is just as important as being able to see predators coming.

While I have not found any research on the number of perching inches that should be offered to our captive budgerigars, I have adopted 4 inches per bird. I arrived at this figure by roughly calculating that the average bird is 1 ½ inches wide, and a 1 ½ inch buffer on each side appears to keep most birds content in my bird room.

The issue of creating some equality in perching is also important. If a limited number of high perches are available it again creates aggression as the more dominant birds seek to maintain their vantage points, pushing other birds to lower perches. While there may be sufficient perching space, i.e. 4 inches per bird, if there is too much inequality in the perching available it still creates a hierarchy that ultimately creates stress.

Consider how comfortable you feel when you get in an elevator and have to travel with a group from the ground floor to the 23rd floor. Ok, now imagine that you need to live, eat and reproduce with those people in that same confined space - permanently! Tell me you wouldn't go crazy...

Here's a couple of ideas:

1. Limit perch stacking as it creates an environment that supports hierarchical aggression by having higher perches, graduating down to lower perches;
2. Provide a number of perching options with different sized perches and interesting shapes. Gum branches are ideal and the birds seem to enjoy the variety. It also can encourage play;

3. Offer more perching than required to ensure birds can find a place they feel comfortable. There are some birds that just gravitate toward a particular perching section, and they are often easy to find as you know where to spot them.

Keeping birds happy and healthy

I'm keen to make sure my birds develop normal behaviours as I rely on them to carry out those behaviours when I put them in the breeding cabinets. This means they need to meet their need for food and water without feeling like their fighting for it, AND they need to be able to relax in between feeds to establish normal relationships within the flock.

Providing enough food and water to meet the needs of the number of birds I hold is just not enough for a healthy population that is capable of breeding. They must also be relaxed and capable of bonding and courtship displays.

Bonding is a very important part of natural courtship for budgerigars as a hen wants to secure a strong pair bond to ensure that her mate will return each day to feed her and her young. Therefore this can't be understated and it's crucial that birds be provided with the space to develop normally if future breeding is to be successful.

So, look critically at your flights to see that your birds can feed normally and behave normally and it will improve your chances when they move into the breeding cabinets.