

Hygiene Protocols for the Prevention
and Control of Diseases
(Particularly Beak and Feather Disease)
in Australian Birds

The Closed Aviary Concept



Australian Government

Department of the Environment and Heritage

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The Closed Aviary Concept

Many of the diseases and problems that arise in aviculture are linked more to mismanagement than to disease agents. In order to counter this problem, the “closed aviary concept” (CAC) was proposed by Speer (1991; 1995), to apply to a single location enclosing all modules of an avicultural facility, with designated areas and limitation of the flow of traffic and fomites .

The CAC has the following tenets:

- Aviculture is farming. The aviary must be productive, irrespective of how many birds are present. An aviary consists of the birds, the buildings and the owner/manager.
- Productivity is the lifeblood of the farm. Without production the farm cannot be supported.
- Time and cost must always be justified. Management effort must be justified in terms of physical time and expense.
- The flock takes precedence over the individual. Flock health concentrates on the group and not on the individual.
- Culling and replacement is fundamental for improvement. If a bird does not perform (health-wise, behaviour-wise or reproductively), it must immediately be removed from the facility (this concept is valid for a domesticated species - culling and selection is domestication, which is not desirable for a species to be released into the wild).
- Stock management protocols are dictated by productivity parameters. Management efforts are dictated by desired production parameters. (This concept applies to a situation where birds will remain in captivity and there is ample genetic base. In an endangered species program, there is a very limited genetic base, and problems of inferior stock may be encountered if numbers are maximised for introduction to the wild).
- The operation shall be restricted to one or a few taxonomic orders or genera. If restricted to one species, disease and management problems are far fewer than with multiple species.
- Preventive medicine is more desirable and economical than symptomatic medicine. It is better to avoid disease than treat it medically.
- Most flock diseases indicate flawed management and are not a viable avicultural diagnosis unto themselves. Whenever a disease appears in an aviary of birds, attention should be focused on defining the links that allowed the disease to establish.
- Short term goals must be prioritised and realised to achieve long term goals. Achieving short term goals brings the long term goals to fruition.
- Drugs are not a substitute for sound management. Over-use of drugs will mask mismanagement in the short term. Multiple drug resistance and subclinical disease will eventually make the avicultural facility unproductive and so uneconomic.

Speer’s concept had separate quarantine, breeding aviary and nursery buildings, with separate isolation areas for each of the birds from the breeding aviary and nursery. Exit from the facility was from the breeding aviary and nursery. The concept is as follows in Figure 1 (after Speer 1995, page 270). This diagram, however, is flawed, since sick birds that recover do not go back through quarantine.

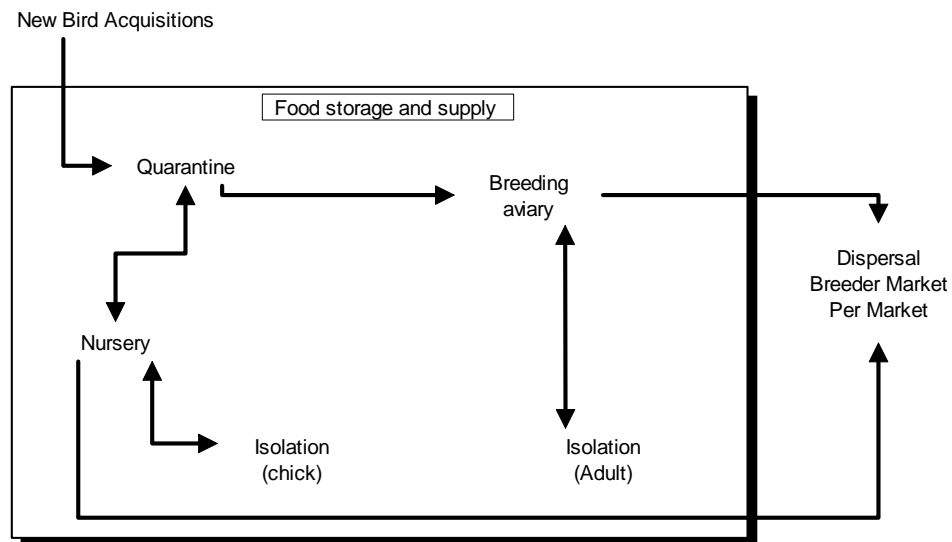


Figure 1: Flow chart illustrating the Closed Aviary Concept

References

1. Speer BL 1991. Avicultural Medical Management. An Introduction to Basic Principles of Flock Medicine and the Closed Aviary Concept. *Vet Clinics North Am: Small Anim Pract.* **21:** 1393-1404
2. Speer B 1995. The Closed Aviary Concept. *The Large Macaws: Their Care, Breeding and Conservation* ed. J Abramson, BL Speer and JB Thomsen. Raintree Publications Fort Bragg California pp. 267-271