

Veterinary Viewpoints

Edited by Amy B. Worell, DVM Dipl. ABVP
Woodland Hills, California

Question: What temperature and humidity levels do you recommend for incubation of parrot eggs? What incubator do you recommend?

M. Reisman
Florida

Answer #1: It is difficult to recommend the exact temperature and humidity requirements for all parrot eggs as species differences exist. In addition, the type, location, and ambient climate of the incubator can also influence proper temperature and humidity settings. One could discuss these topics *ad nauseam* and many literature sources exist. Approximate temperature setting for incubating eggs in a forced-air incubator is 99.1° F, and one degree higher for still-air incubators. During hatching, the temperature should be dropped to approximately 98.5° F.

Incubator humidity is set at 80-84° F

(wet bulb) and the hatcher is set at 92° F (wet bulb).

Specific species or individual eggs may need different settings depending on past hatchability problems.

There are many kinds of incubators and the exact make will depend upon the aviculturist's needs as far as cost or size. One must keep in mind the number of eggs to be incubated, whether the eggs will be hand turned (minimum of eight times per day), how the eggs will be turned automatically, how the eggs are placed into the incubator, and whether the incubator is forced-air or still air. Forced-air models offer a more steady temperature. Parrot eggs can be sensitive to turning mechanisms so rough mechanisms should be avoided. Certain incubators may have trouble maintaining proper temperature and humidity uniformly throughout the incubator, especially if the incubator is underfilled with eggs or if

there are wide swings in the environmental temperature and humidity. Eggs can be hatched with even the cheapest of incubators as long as the aviculturist keeps good records and ensures steady environmental conditions in the incubator room. Eggs should be hatched separately from the incubating eggs as contamination can be a risk from hatching eggs, as well as the need to maintain different temperature and humidity settings for hatching eggs. The Humidaire and the Grumbach incubators seem to be the most common in U.S. aviculture.

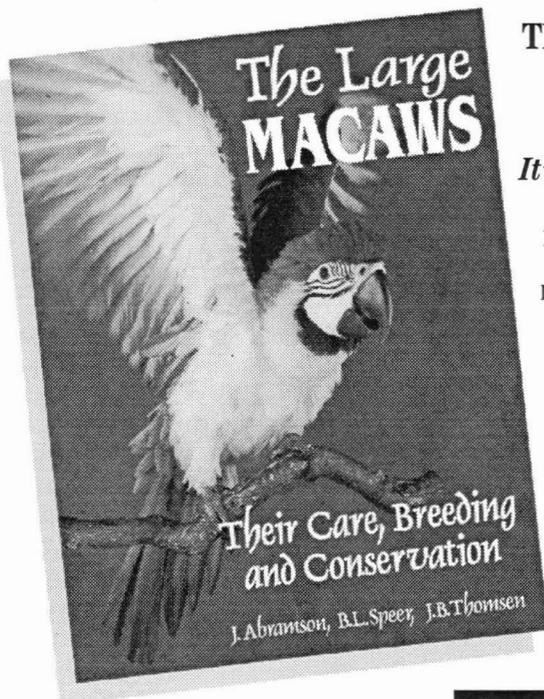
Kim J. Joyner, DVM, MPVM
Raleigh, NC

Answer # 2: The proper temperature range for incubation of psittacine eggs is 99-99.5° F with a wet bulb temperature of 80-82° F. Hatching temperatures should be 98.5° F. Both Humidaire and Grumbach are excellent incubators with Grumbach being a very high-tech unit.

James M. Harris, DVM
Oakland, CA

Answer # 3: Artificial incubation of

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parrot eggs requires the aviculturist have knowledge of the stages of incubation, the gaining of which may involve periods of trial and error as to what techniques work best depending on the particular circumstances and the species being worked with. Artificial incubation can, essentially, be considered both an art and a science.

General recommendations for incubator settings for parrot eggs are temperatures of 99 or 99.5° F with a humidity level of 82° F wet bulb. For the aviculturist just starting in incubation, these recommendations are a good place to start.

If these guidelines result in high hatchability and survival levels, then continue using these values. If the hatchability is low or the babies have difficulty in the hatching process, then these recommendations should be reviewed—along with hatching technique and sanitary considerations—and potentially revised.

In my own aviary, I found that my success rate following these guidelines was less than acceptable, hence, I started experimenting with temperature and humidity levels. Thus, by trial and error, I have for many years had a very high hatchability and survivability rate using a set of values that vary from the general recommendations. With all the species I work with, I find the best success rate using an incubation temperature of 98, F with a wet bulb reading of 90, F. The species include cockatoos, macaws, Amazons, Greys, pionus and eclectus parrots.

As to the best incubator for hatching parrot eggs, that is probably similar to asking a number of experienced aviculturists their preference in a hand-feeding formula. There are a lot of favorites as individuals may have had positive experiences with different formulas.

This is often the case with incubators. Many different brands and models are on the market for use with parrot eggs (including broody Bantam hens). For over 10 years I have used successfully the Marsh Farms Turn-X incubators (now produced by Lyon Electric). These units are relatively inexpensive and allow one to potentially purchase them in multiple numbers. I suggest you purchase at least two of these and, if successful using them, do not change. If not, and you want to try another brand of incubator, consider talking to several aviculturalists raising

the species you are interested in, and purchase according to their recommendations.

Amy Worell, DVM, ABVP
West Hills, CA

Question # 2: I recently purchased a white-faced Cockatiel. It became listless about two weeks after I bought it so I took it to my veterinarian and it was diagnosed as having psittacosis. Two Cockatiels I already had also came down with the disease. They are all being treated with weekly injections and are much better. I think the new Cockatiel introduced this problem into my birds. How can I prove this so the breeder will pay for the expenses I incurred treating my birds?

D. Judge
Toronto, Canada

Answer # 1: Most avian practitioners advise clients to have birds examined and tested prior to placing them into a group of established birds. Newly acquired birds also need to be quarantined for 45 days. Did you have this bird tested before it was placed with your own birds? If not, it will be difficult to prove who gave psittacosis to whom. Birds can carry the disease without symptoms for years. There may be some recourse for you if the seller gave you a health guarantee and you had the bird tested prior to its exposure to your birds. If not, the Anglo Saxon law which states *caveat emptor* (let the buyer beware) may apply.

James M. Harris, DVM
Oakland, CA

Answer # 2: This is an interesting question that frequently arises in avian medicine and even makes it into court on occasion. Basically, there is no way to definitely tell where the birds contracted psittacosis. It may be helpful if all the birds had been tested by the various methods before mixing the birds together. By doing several different types of tests on each bird it could be possible to say if a certain Cockatiel could be shedding the disease or be latently infected, although this is no guarantee as Cockatiels are a difficult species in which to diagnose psittacosis.

If the birds were not tested before mixing them, there is no way to tell where the disease originated as psittacosis can have an incubation period of

two weeks. In other words, two weeks is substantial time for the disease to have passed from your original birds to the new one. Also, the new bird could have been stressed by the move and could have broken with clinical signs of psittacosis after harboring the disease. This is why a long quarantine period to observe the birds is necessary before mixing them into an aviary. The risks are just too great otherwise. Ideally, adding birds to a collection should be kept to a minimum as testing cannot be 100% effective.

Kim Joyner, DVM, MPVM
Raleigh, NC

Answer # 3: I'm glad that your birds are doing well and responding to the antibiotic injections. Unfortunately, unless diagnostic tests are done when a bird is first obtained, prior to its introduction to one's other birds, it is not possible to determine that the new bird, in fact, came with the disease and subsequently shed the organism and infected your other birds.

This is one of the best arguments for diagnostic tests when the bird is first obtained, and also for strict adherence to a new-bird quarantine policy. Many clients bring a newly purchased bird directly to their avian veterinarian for a physical examination and diagnostic tests. Then, once home, the new bird should be quarantined from all other birds for a minimum of six weeks.

My own collection is now closed to the entry of new birds, but in the past, new birds were quarantined at least three months. During this quarantine period, if the new bird becomes ill, it does not expose other birds in the household or collection and the collection, as a whole, is preserved.

As a rule, I like to think that the majority of people selling birds are interested in the well being of the animal and also in the preservation of their own reputation, and hence, sell only those birds they assume are healthy. But as stress is an extremely important consideration in birds and will often upset the bird's homeostatic state, underlying and inapparent disease may become expressed and apparent.

Such probably was the case with the new Cockatiel, both within its own body and also in the two pre-existing Cockatiels. Each probably acted as a stressor on the other.

Amy B. Worell, DVM, ABVP ➤