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PROJECT

Taming Amazon Chicks

by Occasional Handling During the Nesting Stage

Spring 1996 - Avian Sciences - UC Davis
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Parrot chicks are traditionally either hand-raised or parent-raised. Hand-raising requires considerable technical skill in choosing appropriate diets, maintaining the right thermal environment, sometimes adhering to around-the clock feeding schedules and in gaining the hands-on expertise to administer the right amount of feed and to prevent any food from being aspirated into the lungs. Hand-raising, of course, produces chicks that are unafraid of humans and are valued in the marketplace. Hand-raised chicks may, however, imprint on humans and not be reproductively normal. This undesirable feature, from a breeding point of view, appears to be species-specific.

In contrast, parent-reared birds require minimal human labor input because the parents do all of the heavy lifting. Parent-reared chicks imprint on their parents and therefore are reproductively normal as adults, but the down side is that parent-reared chicks are not tame.

Is There a Better Way?

This situation prompted us to ask whether these two methods might be combined to get the best of both worlds. We used our normal breeding protocol to encourage our birds to lay eggs. As chicks were produced, Wendi Aengus handled some birds in each clutch daily for about 15 to 30 minutes each, from 12 days of age until fledging. Handling sessions consisted of removing a chick from the nest box to a handling area that was equipped with a heat lamp and a towel lined plastic tub. There Wendi took daily measurements of growth and other developmental parameters, but largely played with the chicks with gentle coddling and cooing as one would treat a human baby. Although these

chicks were offered Cheerios as a treat when they were several weeks old, the parents did all of the feeding. Wendi also developed a battery of tests to assess tameness at fledging and compared the degree of tameness of handled vs non-handled chicks. Tameness was assessed by determining whether the chick would approach and perch on a finger, accept a food gift and permit its head to be touched on the dorsal side. Respiratory rates were also measured. As predicted, the handled chicks were dramatically tamed by this exposure and at fledging scored high on all of the tameness tests and eagerly approached and climbed on to Wendi at every opportunity.

Wendi then repeated the experiment but this time restricted her handling of chicks to one of two age periods. One group was handled for approximately three weeks ending at day 35 (early handling group), while the other group was handled for an approximately three weeks but beginning at 35 days of age (late handling group). Control birds were not handled. Although both handled groups were clearly much tamer than non-handled birds, the late handled group appeared, subjectively, to be as tame as hand-raised birds, and clearly tamer than the early handled group. We have since tried handling the chicks as a group in clutches, i.e. handling all of the chicks of one clutch as simultaneously as possible, rather than handling each one in separate handling sessions. This approach also produces tame chicks and significantly reduces the handling time per chick.

Caveats

Is this handling regimen worth adopting as standard practice? We do not yet know the answer to several questions. For example, we are not

sure that the chicks do not imprint on humans although we consider this to be unlikely, as the percentage of human handling is small (approximately 1-2%) relative to the amount of time they are with their parents and clutch mates.

We also note that removing a chick from the nest box, particularly the first few times, is risky. In what we interpreted to be re-directed attack, one of our chicks was severely bitten by its mother when we first opened the nest box and approached her to get her off the chicks. We feel that to protect clutch mates, it is critical that the parents be physically separated from the chicks for some time after the removal of a chick for handling to let the parents "cool off" from having been displaced. We have not yet encountered instances of parents failing to incubate chicks after they have been forced off the nest but this possibility must also be considered a risk of the procedure.

The manner in which chicks are handled is also likely to be a major factor in the success of this approach, i.e. it is a safe prediction that handling per se may not be as key an event as gentle handling; rough handling would undoubtedly produce undesired behavioral effects. Also, of course, whether this approach will be economically viable depends on a careful analysis of one's own aviary.

Implications

We feel that habituation of birds to humans and human handling in this manner could have important health implications for chicks, perhaps by improving their immune competence and reducing the stress of veterinary visits. Handling could also increase reproductive performance; falconers have discovered that handled birds show better reproductive performance than non-handled birds. We are presently evaluating some of these possibilities.

This article was published in the Exotic Bird Report (Volume 8, Number 1, a publication of the Psittacine Research Project.

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