

Parrots and the Theory of Co-evolution

TO BE PRESENTED AT THE 2014 AFA CONVENTION

By Tom Marshall

Co-evolution: *The simultaneous evolution of adaptations in two or more populations that interact so closely that each is a strong selective force on the other.*

Conservationists are suspicious of aviculturists (bird breeders) who claim their practice of aviculture is a form of conservation. Animal rights groups insist the keeping of birds in captivity and any form of importation for the purpose of breeding them for the “pet trade” is exploitation of wildlife, and that caged birds are an anathema to the humane and enlightened among us.

Bird breeders welcome the challenge of breeding difficult species, at least once, often because of the recognition and credibility it fosters. However, they frequently concentrate on breeding high-priced “status birds” or low cost, mass-produced “entry-level” pet birds for the pet store chains. Some breeders encourage hybrids, but most do not, and there are your breeders whose fascinations with genetics and color mutations amaze us with their selective breeding results. Fortunately, there are also those breeders who see the value on many fronts in specializing in a species of avian life so it does not disappear from aviculture and can act as a bulwark for the species in the wild.

Of course, there are exceptions and refinements that can be made to these generalities I have provided. However, I do not intend to argue any of the above statements or elaborate any further concerning these points, but rather to suggest **that aviculture, as it pertains to parrots in particular, may be a natural product, neither bad or good, right or wrong of the evolution of man and certain species of birds which, by accident or design, have come in contact with the human species—the result being co-evolution!**



Wildlife biologist, Dr. Jose Courrau, initiates contact with one of his charges in the northwest region of Costa Rica. Photo by Tom Marshall.

For centuries animals that lived on our farms and/or had access to our homes were by definition domesticated animals, and those in the forests, jungles and hinterlands were wild. If they didn't feed us or protect us, they were wild animals. However, in recent history where humans have gained more leisure time and expendable income, a desire was created for non-human companions. At least, in part, it probably began with people's affection for young animals with those big eyes that are so reminiscent of human babies eliciting attention, tenderness and the need for care. The domestication of animals and birds developed from the unique nurturing behavior of the human species, especially the distaff side of the species—women—and once established, it soon spread across the world, leaving few, if any, cultures unaffected.

We refer to our dogs, cats and farm animals, which are further along this co-evolutionary path than are parrots, as domesticated animals. The birds we raise in captivity are heralded as “domestically bred”. Biologically, the process of domestication is a success story without precedent in the history of evolution.

At this juncture, I ask that you re-think our assumptions that domestication is simply the invention of man, an example of man's inevitable subjugation of nature in the march of technological progress. A series of studies has dramatically recast the role of humans in domestication, overthrowing the simple picture of the conqueror and the conquered. Much evidence suggests that far from an example of man's

Cape Fear Parrot Sanctuary

Ces Erdman
Director

Wilmington, NC



910-471-2186
cesnc1978@hotmail.com
"LIKE" us on FACEBOOK!



The Parrot and Bird Emporium
Janet Berube & Deb Ciepiela
Owners
Over 25 Years of Experience

We Offer:
Care of Your Bird
Well Bird Clinics
Vet Instruction
How to Train You & Your bird
Private or Group Training Lessons Available
Call or Email for our Scheduled Events

The Parrot and Bird Emporium
Sales
Boarding
Training
Grooming
Well Bird Clinics

610 College Hwy, Southwick, MA 01077
phone:413-569-5555 • fax:413-569-5599
info@theparrotandbirdemporium.com
www.theparrotandbirdemporium.com

domination, *our relationship with animals is a natural occurrence—often initiated by the animals themselves as a strategy for survival and an opportunity to reproduce itself.*

Over thousands of years, those species which survive have done so as a result of “natural selection.” Natural selection, according to Charles Darwin, in the *Origin of the Species*, is analogous to the type of selection exercised by breeders of cattle, horses, dogs and cats and more recently parrots and other birds. In artificial selection, we humans choose specimens of plants and animals for breeding on the basis of characteristics that we deem to be desirable to us. In natural selection, the environment takes the place of human choice.

Also according to Darwin, inherited variations among individuals, which occur in every natural population, are a matter of chance. In themselves, they have no goal or direction, but they often have positive or negative adaptive values; that is, they may be more useful or less useful as measured by its survival and reproduction. It is the operation of natural selection—the interaction of individual organism with their environment—over a series of generations that gives impetus to evolution. A variation that gives an organism even a slight advantage, makes that organism more likely to live and thus to leave surviving offspring.

The animal rights movement, which likes to romanticize nature and anthropomorphize standards in dealing with animals, promotes the concept that man has dominion over animals

by denouncing man as the enslaver of animals when not considering the plausibility of co-evolution. As blasphemous as it must seem to them, the co-evolutionary view of domestication argues that many domesticates have probably benefited from the association as much or more than people.

Biologists describe the way domesticated animals live in a new ecological niche. Our pet dogs trace their ancestry to wolves. Wolves that began to associate with man were freed of many of the constraints that held their numbers in check, such as limited food supply, competition with other hunters (including man), perhaps even the need to expend energy keeping warm at night once they had man’s fires to share. The rapid population growth that ensued was like the introduction of a new species on an island. In colonizing a new ecological frontier, a premium would have suddenly been placed on the ability to produce rapidly.

Compatible with Darwinian thinking on evolution, those individuals who had a genetic predisposition to reach sexual maturity earlier would produce more offspring who would intend to inherit that genetic trait themselves. Early sexual maturity could also have led to the retention of juvenile features into adulthood, thus the shorter, more puppy-like jaws and muzzles of dogs. Dogs are not wolves, but which species has met their biological imperative to survive better? Wolves demonstrated many pre-adaptive traits that made

Breeding for the Future!

Red-fronted Macaws and Golden Conures

Unrelated parent reared (through weaning)
and hand reared juveniles for breeding
Captive bred permit required for Golden Conures



Proud Supporter of AFA!

662-673-8100

Email: NancySpeed@att.net

www.PPatchParrots.com



We are proud to use these products:



them ideal for domestication. They live in groups, share food and live in hierarchical social structure based on subordination to a pack leader.

Many species of parrots also have pre-adaptive traits, as well, recognized by aviculturist and pet owners alike. They live in flocks much of the time and are quite social, and are capable of forming strong bonding potential, easily transferable to humans. They have a penchant for cultivated crops (fruits, vegetables, grains and seeds), which make them easy to maintain by humans. Their bright colors and their anthropomorphic qualities (an ability to hold things in their "hands" and the ability to mimic the human language) create an immediate and natural affinity with man.

In close association with man, if members of a wild population, such as a wolf or an Amazon parrot, were tamer or less afraid of man, they could possibly gain special advantage by the food or protection they received, allowing them to survive, reach reproductive age and pass that trait of tameness on to their offspring. Individual wolves may have strayed from the pack and initiated contact with man for scraps food around the campfire. That which has developed between the two species, however, has evolved over thousands of years and resulted in man's "best friend", the dog. Parrots, and other bird species that are becoming domesticated to various degrees, may have initiated contact with man too, but in the case of parrots, man is speeding up the relationship through captivity and captive breeding.

Working against natural (as opposed to artificial) domestication is the fact that parrots are prey species and are understandably nervous species that rely on speed escape from predators and have a long flight distance. They could always flee from man when drawn to human habitation for access to crops, etc. Given their intelligence and curiosity, however, many avian representatives made contact. Artificial domestication is achieved by breeding parrots in captivity. Certain parrot species survival, e.g. Blue-throated macaws, may be dependent upon domestication.

However, the inexorable effect, proven by the evolution of the dog from the wolf, by farm animals, and in the process, being strongly suggested in several species of birds, and, in particular, certain species of parrots, is that offspring from the wild populations are or will be tamer and more dependent.

Genetically, the evolutionary process favoring tamer individuals reinforces the pressure for earlier sexual maturity and rapid reproduction to fill the new niche. It is common knowledge among aviculturists that domestically bred birds often go to nest earlier than their wild counterparts, and assisted by man with food and shelter, will raise and produce more young. The trade-off for longer life and greater reproductive success is obviously becoming tamer and more dependent on man.

With all the genuine concern demonstrated for endangered species, what we have learned about the advantage of captive breeding as opposed to the relying exclusively on protecting birds in their natural habitat seems to be supported by the tenets of co-evolution.

- A pair of parrots can be managed to produce more young in a given period than would occur in the wild. This is of vital importance in the case of critically endangered species with very small populations.
- Captive birds, if correctly managed, have the opportunity of passing on their genes in more combinations than would occur in nature. They can be mated with different birds to increase genetic diversity.
- Captive birds have potentially longer life spans when correctly managed because they can be protected from



(561) 795-4878
Fax (561) 790-0059

RAINFOREST CLINIC
For Birds & exotics

3319 E ROAD
LOXAHATCHEE
FLORIDA 33470

SUSAN CLUBB, D.V.M.
susan@susanclubb.com
www.susanclubb.com

Quality Birds at Affordable Prices!

Singing Wings Aviary
31 Old Wire Road East
London, Arkansas 72847



Finches - Canaries - Parrots - Doves

479-293-4994
Email: mandy@singing-wings-aviary.com
Website: www.singing-wings-aviary.com

PAUL HANCOCK
MANDY TUCKER

The Birdie Boutique



AFA members get 10% discount
Use coupon code: **afamember**
Offer expires August 1, 2012
phone 888-442-8426

Largest selection of pet bird supplies, owned and operated by Board certified avian veterinarian.

www.BirdieBoutique.com

predators (including human hunters and poachers), from food shortages and from adverse climatic conditions. Birds in the wild show extremely high mortality, probably thirty plus percent in the first year, as documented by the Puerto Rican Amazon Study, even where the habitat was being protected.

- Captive populations of endangered birds can be located in a country less vulnerable to the natural catastrophes which may occur in their natural habitat, the Amazons parrots on the Caribbean Islands of St. Vincent, St. Lucia and Dominica and elsewhere.

This article's perspective, inspired by the co-evolutionary view of biology, challenges the absolute position of animal rightists. Rather than an exploiter of nature, man in the practice of aviculture and other forms of animal husbandry is a product of nature. The animals that have come under the care of man are following their and our co-evolutionary destiny, and those animals are flourishing as a consequence. True, perhaps those species of animals and birds will eventually change from their wild form to a domestic form, much to the chagrin of many romantics among us, but that is a human concern, not a problem for the species of animals or birds co-evolving. If co-evolutionists are correct, some remarkable and beautiful forces of nature have been at work in producing the interdependence of man and animal, an interdependence that has eliminated much of the suffering and brutality of the wild, an interdependence to be encouraged and cherished.

Don't assume that I see little value in the work of conservationists. I enthusiastically support all conservation efforts, especially when they employ aviculture techniques in bolstering breeding successes in the wild. I want to see parrots' habitats protected for their sake and for all the denizens that share that habitat. However, parrot habitats are threatened all over the world, and we have little control over decisions made in other countries.

I appreciate the professional zoos that have species survival plans (SSP) on certain animals and birds, including many parrot species, such as the Thick-billed parrot which promote good

record keeping on breeding and genetics; and I admire the aviculturist, leading the way in understanding a lot of what we know today about parrots and their needs. I see the value of eco-lodges where people can see wild parrots, and the locals can see the value of protecting those species and earn a livelihood in doing so. I applaud the forty years of work by the American Federation of Aviculture (AFA) in safeguarding the rights of bird breeders and owners and the thought-provoking Theory of Co-Evolution.

I am not fond of animal rights groups that don't know the animals they purport to protect, but I fear their zeal and so should you. Support AFA.

Budiansky, Stephen. "How Animals Tamed People", U.S. News and World Report. May 20, '89

Budiansky, Stephen. The Covenant of the Wild: Why Animals Chose Domestication. New York. William Morrow and Company, 1992.

Curtis, Helena and Barnes. Biology. New York: Worth Publishers, 1989
Low, Rosemary. Endangered Parrots. Dorset, England: Blanford Press

Voren, Howard. "Wild Child: Should Parrots be included in the list of Domesticated Animals?" BIRDS USA 1995/96

Super 8 Raffle Prizes

Support the AFA and win one of these great prizes!

Drawing donations: \$3 per ticket, \$12 per page, \$20 for 8 tickets. Deadline: Mail-in tickets must be received by AFA by July 15, 2014, to be entered in the drawing. Onsite purchases and hand-carried tickets may be deposited at the Convention any time up to moment of drawing. AFA is a 501(c)3 educational organization. **For additional tickets, contact:** AFA, P.O. Box 91717 • Austin, TX 78709 • Tel: (512) 585-9800 Fax: (512) 858-7029 • afaoffice@afabirds.org or visit www.afabirds.org. Additional tickets may also be printed from the website.

\$500 Gift Certificate for HARI Approved Food Products *donated by Hagen USA*



Tropican, Tropimix, Living World Clay-Cal and Prime Vitamins. Includes shipping to Continental U.S.

Complete set of AFA Conference DVD's 2009-2013 *donated by AFA*

80+ titles from the last five years of AFA.



Ruby and Diamond Ring *donated by Georgia Hayes*



\$500 Cash Card *donated by ABC Birds*



Surface 2 32GB Tablet (magnesium) *donated by Mark E. Moore*



Quilt – Full size 72"x87", machine quilted *donated by Sharon Garsee*



Full Registration, including banquet and 4 nights at convention hotel for 2015 AFA Conference in Chicago, IL *donated by AFA*

July 29, 2015 through August 1, 2015



- Full Registration for Conference
- 4 nights at Hyatt O'hare

BioGS SPA-625A HEPA Air Purifier *donated by Rabbit Air*



The BioGS 2.0 is Rabbit Air's latest ultra-quiet HEPA air purifier, removing pollutants from the air while giving back nothing but clean air in return. Four stages of filtration and deodorization.

www.RabbitAir.com/bird

Drawing is subject to any rules and regulations that may apply from state to state. Winners are responsible for payment of federal income tax on prizes won. Winners are responsible for payment of shipping charges related to claiming their prize unless otherwise stated. The American Federation of Aviculture reserves the right to add or remove any prize from this list. AFA assumes no responsibility for any statement about prizes by anyone other than the drawing chairman.

Tickets available online at www.afabirds.org

2014 AFA Super 8 Raffle Ticket Payment Stub • American Federation of Aviculture Inc. • P.O. Box 91717 • Austin, TX 78709 • (512) 585-9800 • www.afabirds.org

Please indicate payment preferences and return to AFA with completed raffle tickets to the AFA Office. • Winners will be drawn on Saturday, August 2, 2014

Ticket Donations

- 8 Tickets for \$20
 12 Tickets for \$30
 1 Page for \$12
 1 Ticket for \$3
- Check or Money Order**
 only accepted for \$10 or more
 MasterCard Visa American Express

Credit Card

Credit Card Number _____

Name on Card _____

Exp. Date _____

Signature _____

2014 AFA Super 8 Raffle Ticket

✓ **Check one • Your choice!**

- \$500.00 Gift Certificate for HARI Food Products**
 donated by Hagen USA

- \$500 Cash Card**
 donated by ABC Birds

Name _____

- Surface 2 32GB tablet**
 donated by Mark E. Moore

- Ruby & Diamond Ring**
 donated by Georgia Hayes

Address _____

- Quilt - Full size 72"x87"**
 donated by Sharon Garsee

- 2014 AFA Convention Registration**
 incl. four nights at Conv. hotel

City, State, ZIP _____

- AFA Conference DVD's 2009-2013**
 donated by AFA

- BioGS SPA-625A HEPA Air Purifier**
 donated by Rabbit Air

Telephone _____

American Federation of Aviculture, Inc.
 P.O. Box 91717 • Austin, TX 78709 • (512) 585-9800 • www.afabirds.org

Drawing chairman reserves the right to add or remove any prize. Winners do not need to be present. Winners must claim prizes within 30 days after notification. Unclaimed or unwanted prizes will be sold, with the proceeds going to AFA. Donations: 12 tickets for \$30 or 1 ticket for \$3. Void where prohibited by law.

2014 AFA Super 8 Raffle Ticket

✓ **Check one • Your choice!**

- \$500.00 Gift Certificate for HARI Food Products**
 donated by Hagen USA

- \$500 Cash Card**
 donated by ABC Birds

Name _____

- Surface 2 32GB tablet**
 donated by Mark E. Moore

- Ruby & Diamond Ring**
 donated by Georgia Hayes

Address _____

- Quilt - Full size 72"x87"**
 donated by Sharon Garsee

- 2014 AFA Convention Registration**
 incl. four nights at Conv. hotel

City, State, ZIP _____

- AFA Conference DVD's 2009-2013**
 donated by AFA

- BioGS SPA-625A HEPA Air Purifier**
 donated by Rabbit Air

Telephone _____

American Federation of Aviculture, Inc.
 P.O. Box 91717 • Austin, TX 78709 • (512) 585-9800 • www.afabirds.org

Drawing chairman reserves the right to add or remove any prize. Winners do not need to be present. Winners must claim prizes within 30 days after notification. Unclaimed or unwanted prizes will be sold, with the proceeds going to AFA. Donations: 12 tickets for \$30 or 1 ticket for \$3. Void where prohibited by law.

2014 AFA Super 8 Raffle Ticket

✓ **Check one • Your choice!**

- \$500.00 Gift Certificate for HARI Food Products**
 donated by Hagen USA

- \$500 Cash Card**
 donated by ABC Birds

Name _____

- Surface 2 32GB tablet**
 donated by Mark E. Moore

- Ruby & Diamond Ring**
 donated by Georgia Hayes

Address _____

- Quilt - Full size 72"x87"**
 donated by Sharon Garsee

- 2014 AFA Convention Registration**
 incl. four nights at Conv. hotel

City, State, ZIP _____

- AFA Conference DVD's 2009-2013**
 donated by AFA

- BioGS SPA-625A HEPA Air Purifier**
 donated by Rabbit Air

Telephone _____

American Federation of Aviculture, Inc.
 P.O. Box 91717 • Austin, TX 78709 • (512) 585-9800 • www.afabirds.org

Drawing chairman reserves the right to add or remove any prize. Winners do not need to be present. Winners must claim prizes within 30 days after notification. Unclaimed or unwanted prizes will be sold, with the proceeds going to AFA. Donations: 12 tickets for \$30 or 1 ticket for \$3. Void where prohibited by law.

2014 AFA Super 8 Raffle Ticket

✓ **Check one • Your choice!**

- \$500.00 Gift Certificate for HARI Food Products**
 donated by Hagen USA

- \$500 Cash Card**
 donated by ABC Birds

Name _____

- Surface 2 32GB tablet**
 donated by Mark E. Moore

- Ruby & Diamond Ring**
 donated by Georgia Hayes

Address _____

- Quilt - Full size 72"x87"**
 donated by Sharon Garsee

- 2014 AFA Convention Registration**
 incl. four nights at Conv. hotel

City, State, ZIP _____

- AFA Conference DVD's 2009-2013**
 donated by AFA

- BioGS SPA-625A HEPA Air Purifier**
 donated by Rabbit Air

Telephone _____

American Federation of Aviculture, Inc.
 P.O. Box 91717 • Austin, TX 78709 • (512) 585-9800 • www.afabirds.org

Drawing chairman reserves the right to add or remove any prize. Winners do not need to be present. Winners must claim prizes within 30 days after notification. Unclaimed or unwanted prizes will be sold, with the proceeds going to AFA. Donations: 12 tickets for \$30 or 1 ticket for \$3. Void where prohibited by law.