

Producing an AZA-Approved Studbook for the Red-browed Amazon Parrot

(*Amazona rhodocorytha*)

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Accurate record keeping has long been recognized as a necessary management tool for captive animal populations. The steady proliferation of studbooks through the American Zoo and Aquarium Association (AZA) testifies to the necessity of compiling detailed demographic information for any given species in a single, accessible resource. Life-history tables, the source of specimens and their pedigrees, facility holdings and records of breeding successes are but some of the fruits of studbooks. Zoo curators and private breeders alike have become increasingly aware of the role that such information plays in successful husbandry and long-term propagation, particularly of rare species represented by a limited captive gene pool.

Despite the acknowledged need for studbooks for many species that do not yet have them, the process through which such volumes are generated is surprisingly unfamiliar to many in the aviculture field. Employees of AZA member facilities have direct access to the materials used to produce sanctioned studbooks, including training courses, computer software and consulting personnel at AZA's conservation office. For the most part private aviculturists, however, are uncertain about what exactly studbooks are and how they can be used, much less how they might be compiled. This paper discusses the first AZA-approved studbook generated completely from the private sector, covering a rare parrot species held privately in the U.S. As a model of private studbook generation using established

criteria, this case illuminates how studbooks bear upon the private avicultural community's participation in cooperative breeding programs under the AZA.

Studbooks – what, why and when?

Simply stated, a studbook is a listing of all known historical information on a captive population of a single species. The information is attached to each individual, alive or dead, that was ever known to have been held captive. Studbooks may be regional, covering a given geographic area, or international, covering all collections worldwide. Demographic data, such as dates of birth and death and the identity of parents, is provided for all specimens historically back to the origin of the captive population – which by definition must be the wild. Details about when specimens were imported and by whom, and all subsequent transfers of specimens among facilities provides a record of all activity within the population. By accounting for the origins of animals and tracking all events in the group, genetic monitoring of the population as a whole is possible. Crucial decisions such as which mates to pair to avoid inbreeding (or to determine how severe it is) or how to avoid over- or under-representation of bloodlines thus are readily made on the basis of real data.

Clearly, not every species in captivity is in dire need of a studbook. Species represented by large populations, good rates of production and numerous, diverse founder stocks may become well established in captivity without

intensive genetic monitoring. Such species are likely to have at least a stable status in the wild and be of low conservation priority. With minimal attention given to the group as a whole, these populations can be managed relatively easily for many generations. In light of the labor required to produce and keep studbooks, the general consensus among zoo professionals is that such efforts be directed primarily toward high-priority species for whom critical population-level decisions must frequently be made. Nonetheless, the information provided by studbooks is valuable regardless of the size of the captive population or the status of the species – i.e., good data are always appreciated. Hence, the issue of whether to compile a formal studbook should be debated on the grounds of the magnitude of the task initially, the likelihood of utilizing the information in a meaningful way, and the investment required to assure completeness and accuracy of the records *indefinitely*.

The Red-browed Amazon – a model case

Like most avicultural enterprises, our facility has long recognized how important historical data is in making decisions about breeding. We discovered early-on with the Red-browed Amazon that the only hope for the captive population was careful management and lots of luck. Starting in 1988 with a founder group of about a dozen birds and a history of poor reproduction, we embarked on the frustrating quest to develop a breeding protocol for the species and

to document a captive recovery plan.

Compiling a studbook made sense from all perspectives. First, the species is poorly represented in captivity worldwide, and the population is small – probably less than 150 total in collections. Second, the North American group is held almost entirely by our facility, which greatly facilitated the research on individuals and where they originated. Finally, the European EEP, analogous to the Species Survival Plan of the AZA, had recently been initiated, furthering the momentum to consolidate conservation efforts into a high-priority, global masterplan.

As a member of ISIS – the International Species Information System – we had access to the software SPARKS (Single Population Animal Record Keeping System), which is a straightforward, D-base packaged program for generating studbooks. It is the established format for national and international studbooks written by zoological facilities everywhere. ISIS works closely with AZA and IUCN (the International Conservation Union), and has developed the software for ease of use and compatibility with the established zoo inventory system ARKS (Animal Record Keeping System). No other software compares with these databases in terms of thoroughness, support base or universality. In addition, SPARKS is recognized by institutions worldwide.

After compiling the historical data and accounting for as much detail as possible for all specimens, the studbook was prepared by following SPARKS supporting documentation and the numerous studbooks examples available through AZA's conservation office (7970-D Old Georgetown Rd., Bethesda, MD 20814-2493; (301) 907-7777). I then approached AZA's Parrot Taxon Advisory Group (TAG) Chairman Dr. Don Bruning (Bronx Zoo) about endorsing the studbook through the AZA. After many fruitful discussions, we agreed there was a clear need for the reference, and its origin from the private sector might foster a new era of cooperation between the AZA and private aviculture. The proposition to send the studbook to AZA's Wildlife Conservation and Management Committee (WCMC), the group which reviews and approves all AZA-sanctioned studbooks, was made at the AZA national meeting in September 1994. The Parrot TAG formally endorsed the studbook and forwarded its appli-

cation to WCMC in late October. After several administrative hurdles, WCMC approved the studbook in April 1995, and the Parrot TAG endorsed it under the auspices of the Wildlife Conservation Society (NYZS).

Significance

AZA's endorsement of the Red-brow studbook – and its discussion in this journal – are notable on several fronts. The cooperative spirit in which the work was completed holds promise for future involvement of private aviculturists in managed programs. This signals a dramatic departure from an atmosphere of tension and distrust that many feel has long separated the zoo and private avicultural camps. Whereas AZA already provides private parties with the means to participate in SSP's (e.g., Palm Cockatoo, Bali Mynah, and Thick-billed programs) and breeding consortia (Cuban Amazon Consortium), this is the first studbook to originate from private aviculture and receive AZA's stamp of approval. As a precedent, this case identifies a new avenue through which other rare, privately-held species formally may be recognized by the AZA.

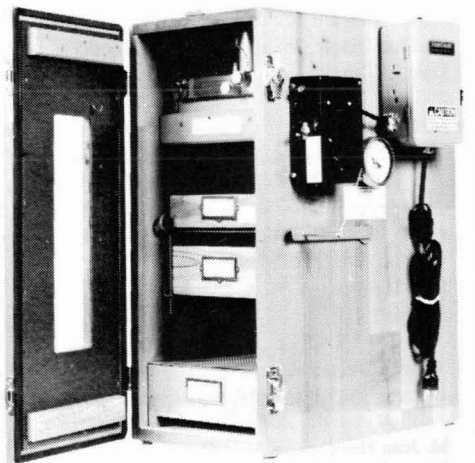
Such recognition is not trivial. AZA interacts closely with the U.S. Fish and Wildlife Service, USDA, CITES and conservation groups and governments worldwide. It is the organization that

essentially defines the scope and substance of captive animal husbandry in this country. AZA's receptivity toward the studbook proposal – however reluctant initially – suggests more than an air of goodwill, but a mutual recognition of competence in husbandry, need for disclosure and respect between the zoo profession and private breeders.

We consider participation in AZA's programs a privilege. There is no question that the process of studbook generation and approval is difficult and lengthy, with more than its share of political frustrations. Hopefully, future efforts will be more streamlined now that the path to approval from the private sector has been tested. I encourage other aviculturists to investigate and pursue AZA's programs and to follow established protocols for studbook production. I thank Mr. Charles Osterbrink for his avicultural expertise and dedication to this species, Dr. Don Bruning for his continued support, Dr. Hugh Quinn (WCMC) for overseeing the review process, and the panel of anonymous reviewers from AZA who voted on the petition. Finally, I thank AFA for its interest in the endorsement process. By projecting leadership in private aviculture the AFA can help to integrate successful programs and practices into the private sector where all parties, and the species they manage, benefit. ➔

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