



NPRRP

National Parrot Relinquishment Research Project

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Report to PETsMART Charities

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Introduction:

Recently there has been increased public attention directed toward issues surrounding parrot ownership and relinquishment. While there are strong opinions on all sides of these arguments, to date this has been an essentially data-free dialogue. The full scope of the issue is difficult to ascertain due to the fact that companion parrots have been largely excluded from studies of pet population dynamics. Thus, members of the avian community have found themselves in the position of making assessments regarding the status of the companion parrot population based on anecdote and individual experience.

Survey-based studies are the primary research tools used for understanding companion animal population dynamics. To address the need for data on the dynamics of the companion parrot population, the National Parrot Relinquishment Research Project (NPRRP) was conceived to collect survey data. The goal of the NPRRP was to provide a forum where data from individuals and organizations involved with accepting, caring for, and placing relinquished parrots could be collected impartially and efficiently. The central feature of the NPRRP was a web-site where individuals could go to learn about the project and participate in the survey.

The NPRRP was designed to collect data on all Psittacine species regardless of size. This includes: Macaws, Cockatoos, Amazons, African Greys, Conures, Pionus, Caiques, Lorikeets / Lories, Cockatiels, Budgies, Lovebirds, Eclectus, Poicephalus, Parakeets, and others. This project did not collect data about other birds such as canaries, finches, pigeons, etc.

In any study, clear definitions of terms are essential to successful data collection. In order to minimize the opportunity for confusion, the following definition of relinquishment was used consistently throughout the survey and on the project web-site.

“Relinquished parrots are parrots that have been given up by one or more owners for any reason. Relinquishment may or may not involve the exchange of money. However, the transaction of a parrot from a breeder to wholesalers or retailers for the purposes of resale is not considered relinquishment. In addition, the transaction of a parrot from a breeder, wholesaler or retailer to the first owner is not considered relinquishment. Any subsequent sale or surrender of the parrot is considered relinquishment. Other terms used to describe this population of parrots include: previously owned parrots, surrendered parrots, unwanted parrots, homeless parrots, abandoned parrots, re-homed parrots or displaced parrots.”

Several specific objectives guided the development of the project. First, data would be collected on the intake of relinquished parrots over a 12 month period. Second, data would be collected on the disposition of relinquished parrots over the same 12 month period. Finally data would be collected which would characterize the population of relinquished parrots with respect to features such as species, age, behavior, health, reasons for relinquishment, and placement status. The NPRRP is the first project of its kind to be undertaken in the avian community and the results of this study should serve as a valuable resource in beginning to understand the dynamics of the companion parrot population, as well as in planning for the future.

Methods:

The National Parrot Relinquishment Research Project was initiated to collect data on companion parrot relinquishment. At the center of this project is a web-site which hosts an on-line survey designed to collect data from a wide variety of respondents. This project was conducted in a series of phases over the course of 14 months.

Phase 1: Planning and Development

Phase 1a: Advisory Committee

One of the first goals of the NPRRP was to assemble an advisory committee comprised of members of the parrot community. The selected individuals participated on a voluntary basis and provided advice on respondent recruitment, survey design and public relations. The following individuals served on this advisory committee:

- **Monica Engebretson**, Animal Protection Institute
- **Sybil Erden**, The Oasis Sanctuary
- **Jamie Gilardi**, World Parrot Trust
- **Diana Holloway**, Amazona Society
- **Bonnie Kenk**, PEAC
- **Eileen McCarthy**, MAARS
- **Julie Murad**, The Gabriel Foundation
- **Shauna Roberts**, The Gabriel Foundation
- **Brian Speer**, The Medical Center for Birds
- **Alison Talley**, University of California, Davis
- **Genny Wall**, American Federation of Aviculture
- **Liz Wilson**, Parrot Behavior Consultant

Phase 1b: Survey Development

Since there are many groups, individuals and organizations involved with parrot relinquishment, it was not appropriate to develop a single survey to address this audience. Thus, the NPRRP consisted of a complex of surveys designed to be utilized by a diverse group of potential respondents. Each survey was developed to be interactive with built in contingencies which would yield a customized survey experience for each user. The framework for each respondent's survey was dependent on their selection of the respondent category that best matched their involvement with parrot relinquishment. Eleven potential survey respondent groups were identified:

- Parrot Welfare Organizations (rescues, sanctuaries, etc.)
- Humane Organizations (shelters, private and government humane societies, etc.)
- Aviculturists (parrot breeders)
- Veterinarians
- Parrot Behavior Consultants
- Foster care providers
- Bird Clubs
- Pet Stores
- Zoos
- Individuals (those involved with parrot relinquishment, but not affiliated with any of the above categories)

Question sets were developed using design methods established to provide a user-friendly experience and preserve data reliability.

Beta-versions of all surveys were made available to advisory committee members on the project web-site. Committee members were given a one month period to review the surveys and submit feedback. A specialized on-line comment submission system was provided so that committee members could enter comments as they moved through the survey.

Survey content was revised in response to the suggestions of the advisory committee. In addition, pilot testers were utilized to check the survey for any technical errors.

Phase 1c: Contact Database Development

We assembled a database of contact information for individuals, groups and organizations that matched the respondent categories outlined above. Contact information was collected from web-sites, professional directories, conference materials, personal

communication, and through the advisory committee. The final contact database included 1,581 entries.

Phase 1d: Web-site Development

The NPRRP web-site (www.nprrp.org) was designed as the project's center for data collection and information dissemination. A detailed FAQ was developed to allow users to learn about the project, and a user friendly interface was designed to facilitate a positive experience for survey participants.

Phase 2: Initial Launch

The survey was made available to the public in December of 2003. Due to advertisements and invitations to participate, public attention of the project was very high. In the days following the launch, the parrot community became very vocal and very divided with respect to this project. Rumors began to develop and spread regarding the nature of data collected, the affiliations of the associated organizations, and the motivations of project staff. We worked very hard to replace rumors with factual information wherever possible, but it became apparent that the NPRRP was suffering from the mis-information some members of the parrot community continued to disseminate. At about the same time, we experienced a server error which caused a loss of data. Given these two unfortunate events so early in the data collection period, the decision was made to pull the survey off-line and take some time to recover from the server crash and work more extensively on public relations.

Phase 2a: Public Relations

We set up a Yahoo! user group and invited all members of the parrot community to join. Three formal chat sessions were scheduled where individuals could ask questions and express their concerns with project staff and advisors. In addition, I personally responded to several hundred e-mails from interested members of the parrot community. Through this process of communication with both supporters and skeptics, several issues were brought to light that I determined could strengthen the NPRRP surveys. At that time, I made the survey content available to any interested member of the parrot community and requested constructive feedback and comments. I received such from 30 individuals, and many of their suggestions were taken into consideration as I made the final revisions to the survey content. This several week process of open communication and survey revision had an extremely positive effect on the perception of the NPRRP in the parrot community. Rumors regarding the project were replaced with a new understanding of the project, its goals and its methods. The NPRRP gained many supporters through this process and many of these individuals acted as advocates for the project in their respective communities. Although extremely trying, and quite time consuming, this

process was essential for the ultimate acceptance of the NPRRP in the broader avian community.

Phase 2b: Outreach

One thing we learned from interacting with the public about the NPRRP was the importance of continued outreach to garner participation and support. To this end, we began an advertising campaign which included direct e-mail contact with potential participants, articles in both on-line and printed media, links on a variety of parrot related web-sites, postings on internet chat sites and user groups, and mailings. Some highlights of this campaign include:

- Articles in ‘Animal Sheltering’ Magazine and ‘Animal Sheltering’ on-line.
- Article in ‘Parrot Chronicles’, an e-zine with over 2,000 subscribers.
- Articles in the Animal Protection Institute’s newsletter.
- Direct mailing of 1,500 post-cards.
- Direct e-mailing to over 1,000 recipients.
- Links on a wide variety of web-sites including: Avian Welfare Coalition, The Gabriel Foundation, American Federation of Aviculture, The National Cockatiel Society, Avian Treasures, MAARS, The Holistic Bird Newsletter, World Animal Net, Avian Protection Society and more.
- Postings on over thirty news groups and message boards including those for Avian and Exotic veterinarians, parrot breeders, and parrot owners.

Phase 3: Re-launch

The NPRRP was re-launched in early January. Response to the re-launch was very positive and we received a significant amount of traffic on the site.

Phase 3a: Data Collection

As respondents completed their surveys, data were stored in a custom designed database. Data collection continued through March 31st, 2004. Although the web-site remains active and respondents continue to submit surveys, responses received after March 31st are not included in the current analysis.

Phase 3b: Data Cleaning

Data were checked for validity using several tools built into the survey. These included checking for consistency of responses when the same question was asked multiple times, reading comments for any suspicious entries, and testing the reliability of numeric

responses. Surveys that did not meet validity requirements were removed from the database.

Phase 4: Data Analysis

Due to the length of the survey and the size of the respondent pool, tremendous amounts of data were produced. Thus, we consulted with PETsMART Charities staff members including Joyce Briggs, Patty Finch, and Carol Moulton to arrive at a series of objectives for the data analysis process. The following priorities were identified:

1. Intake of relinquished parrots:
 - a. How many parrots were accepted by respondents?
 - b. How were these parrots distributed among the respondent groups?
 - c. How were species groups represented in this population?
 - d. What were the reasons for relinquishment?
2. Disposition of relinquished parrots:
 - a. How many parrots were placed by respondents?
 - b. Where were the parrots placed?
 - c. How many relinquished parrots are in sanctuary (or other permanent) situations where they will not be adopted out in the future?
 - d. How many parrots in the relinquished population died of natural causes?
 - e. How many parrots in the relinquished population were euthanized?
 - f. What were the reasons for euthanasia?
3. Characterizing the population of relinquished parrots:
 - a. What species are represented in the relinquished population?
 - b. What are the behavioral characteristics of this population?
 - c. What are the medical characteristics of this population?
 - d. What are the ownership history characteristics of this population?
 - e. What is the age structure of this population?
 - f. How many relinquished parrots are currently available for placement?

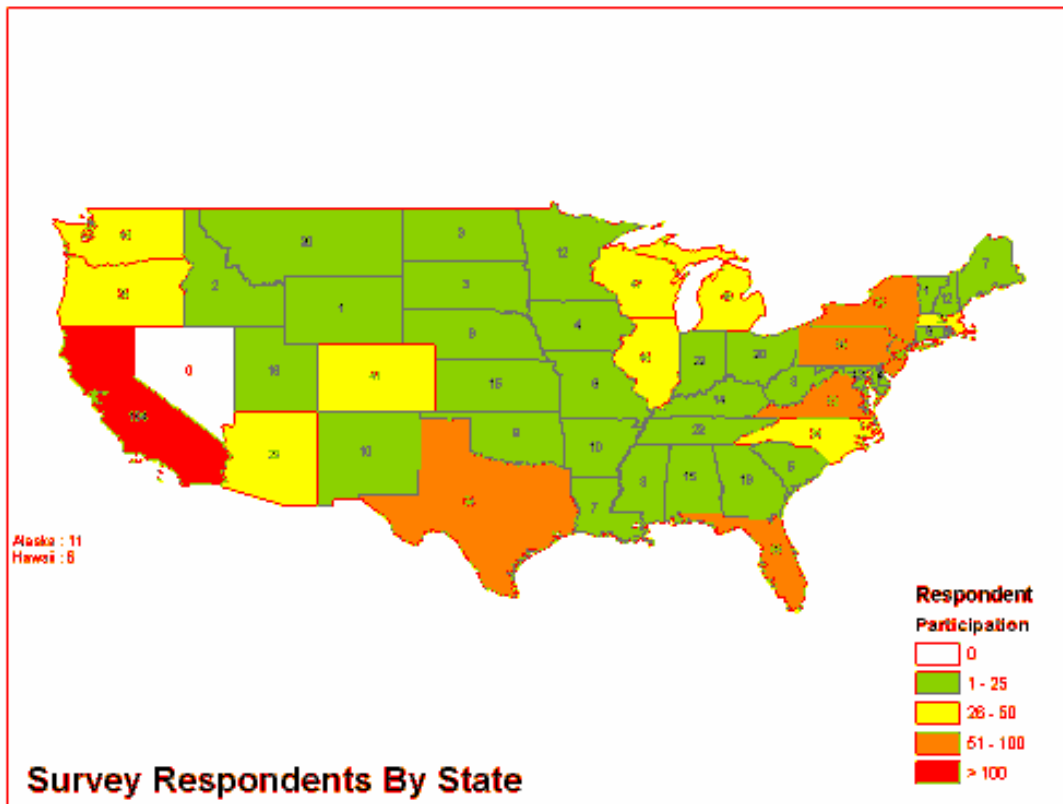
Results:

Responses by User Group:

<u>User Group</u>	<u>Count</u>
Individual	455
Parrot Welfare Organization	85
Humane Organization	53
Breeder	47
Veterinarian	41
Foster Care Provider	41
Bird Club	38
Parrot Behaviorist	9
Store	8
Zoo	2

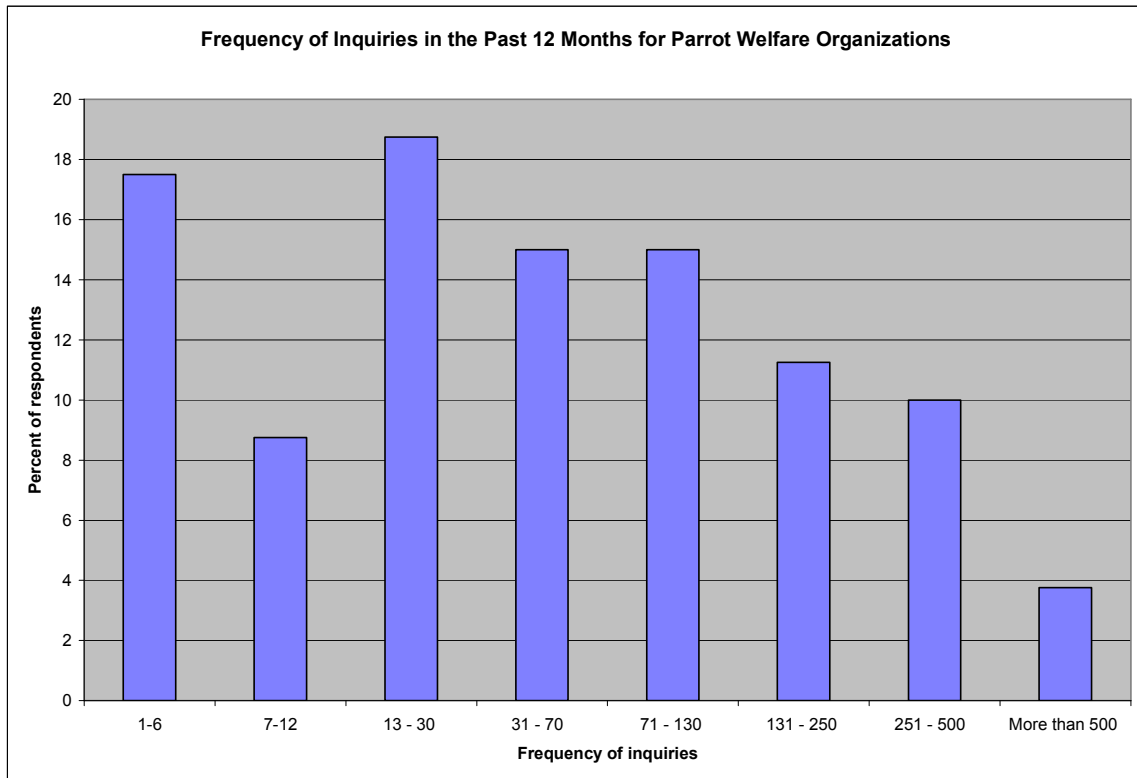
Responses by State:

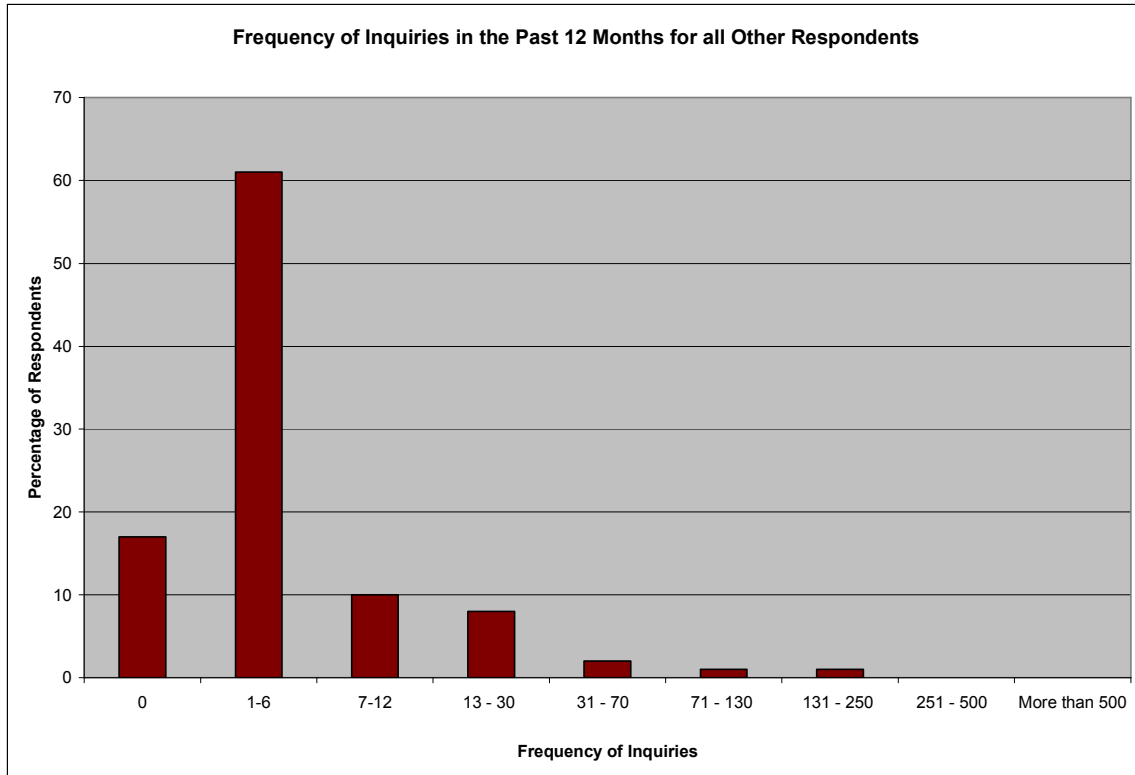
All states, with the exception of Nevada and the District of Columbia, were represented in this survey population. The map below shows the distribution of survey respondents by state.



Inquiries from Public Regarding Parrot Relinquishment:

Respondents were asked to estimate the number of contacts (phone calls, visits, letters, e-mails, etc) they had received from people inquiring about relinquishing one or more parrots. Responses are displayed below first for Parrot Welfare Organizations, then for all other respondents.





Intake of Relinquished Parrots:

Respondents were asked to indicate if they had taken in any relinquished parrots over the past 12 months. If they responded yes, they were then asked to indicate how many relinquished parrots they had accepted in the past 12 months. In addition, they were asked to indicate how many of those parrots were kept as companion or pet parrots by their most recent previous owner.

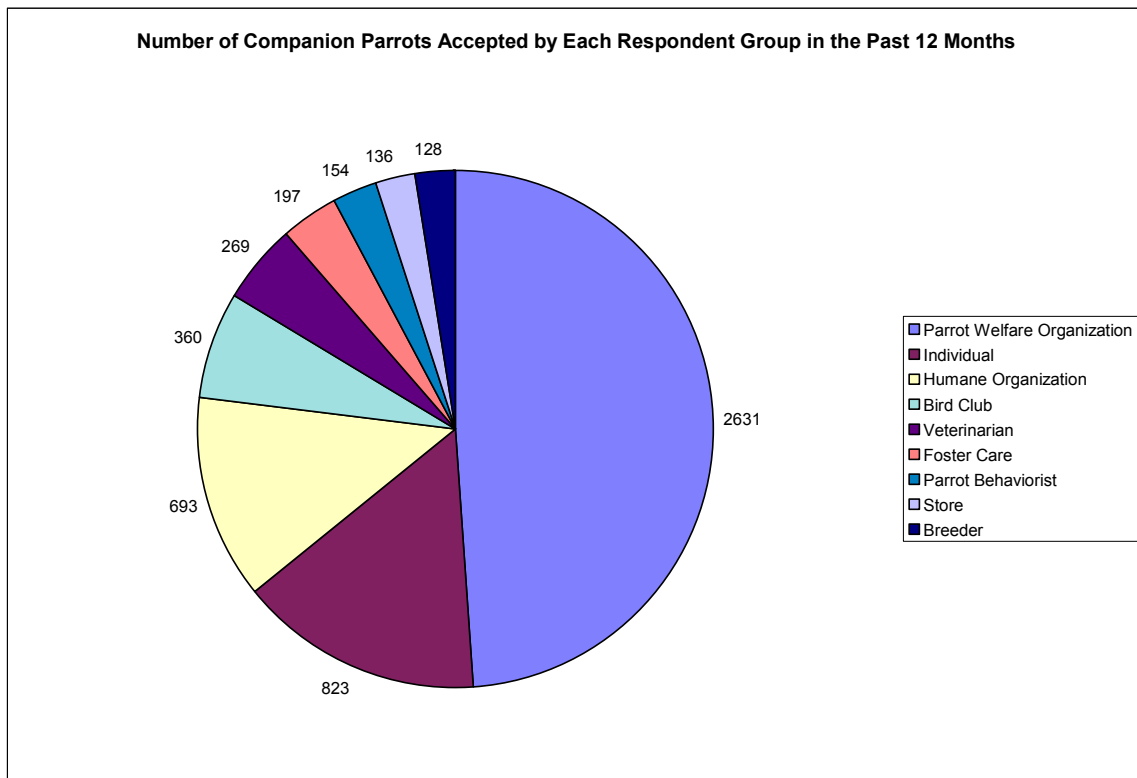
It is important to note that there is the possibility that a single parrot would have been relinquished and accepted multiple times in a 12 month period. Thus, a single parrot might be counted more than once in the total number of parrots reported if that parrot was accepted by multiple survey respondents. Because we cannot track individual parrots through the system, it is impossible to know how often single parrots are represented multiple times in these figures. However, the only way that a single parrot would be represented multiple times in the data set is if it were relinquished multiple times in the past 12 months. Thus, the most conservative way to interpret these figures would be to view them as “number of acts of relinquishment” rather than “number of parrots”. It should be noted that this is a distinction that is not generally made in pet population dynamics research. Generally, each animal accepted at a shelter is viewed as an individual animal without consideration of the fact that this animal may be represented multiple times in the data set. Thus, for the purposes of this report data will be presented as number of relinquished parrots accepted by respondents.

For all respondents, the results questions regarding intake of relinquished parrots are as follows:

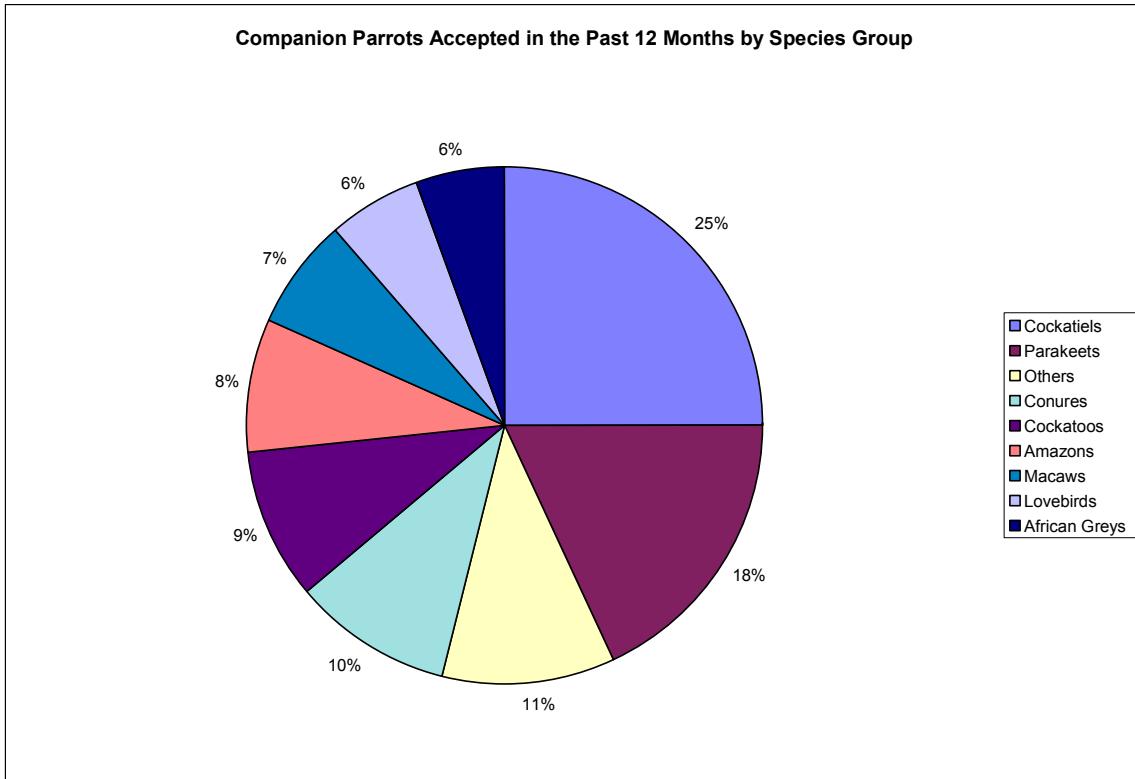
Accepted in the past 12 months (total): 5,391

Accepted in the past 12 months (companion/pet): 4,051

The total number of companion/pet parrots accepted broken down by respondent group is displayed in the figure below:



The companion/pet parrots accepted in the past 12 months broken down by species group is displayed in the figure below:



Reasons for Relinquishment:

Respondents were asked to indicate the reasons owners gave when relinquishing their parrots. The most commonly cited reasons along with the frequency that each reason was given are listed in the table below:

Reason Given	N	Percent of Total
Not enough time	1267	31
Biting/aggression	755	19
Noisiness	621	15
Not compatible with family members	572	14
Moving	469	12
Other reasons	413	10
Unknown	338	8
Having a baby	335	8
Physically unable to care for the parrot	319	8
Illness or medical problems in the family	255	6
Feather destructive behavior	240	6
Someone in the household in allergic to parrots	180	4
Cost of care and upkeep	174	4
Not enough space	164	4
Marriage / Divorce	158	4
Death in the family	146	4
Difficult to train	103	3
Not compatible with other parrots in the household	61	2
Retirement	59	1

Direct Transition of Relinquished Parrots into New Homes:

In some cases, respondents indicated that they assisted with the transition of relinquished parrots directly into new homes. In these cases, they did not provide direct care for the relinquished parrot themselves, but instead acted as a liaison between the relinquisher and the new owner. A total of 207 respondents indicated that they were involved in this type of re-homing and these respondents reported that they had assisted with the transition of 2,001 parrots in the past 12 months.

Disposition of Relinquished Parrots:

Respondents were asked to indicate if any relinquished parrots had left their care in the past 12 months. Information about three categories of disposition was specifically requested.

1. Relinquished parrots that had died of natural causes: 160
2. Relinquished parrots that had been euthanized: 46
 - a. Medical reasons: 43
 - b. Behavioral reasons: 2
 - c. Not Adoptable: 1
3. Relinquished parrots that had been placed: 3,321

We asked respondents to indicate where parrots had been placed in the past 12 months. The results are displayed in the table below:

Placement	N	% of total
Permanent private homes	3048	92
Other permanent placement	180	5
With a parrot breeder (for breeding purposes)	91	2.5
With a zoo, public aviary, or animal park.	2	.5

Euthanasia:

In order to gain a better understanding of practices of parrot euthanasia as well as attitudes towards the practice, we asked a series of questions on the subject to all veterinarians, humane organizations, and parrot welfare organizations.

The majority of the responding veterinarians reported that they received infrequent requests to euthanize companion parrots because the owners no longer wished, or were no longer able to care for them. 53% of the veterinarians indicated that they had received no such requests in the past 12 months, 39% indicated that they had received 1-6 requests in the past 12 months, and 8% indicated that they received 7-12 requests in the past 12 months.

When asked about the numbers of parrots euthanized in the past 12 months, veterinarians reported that the only OWNED parrots that were euthanized in their practices (N=332) were euthanized for medical reasons. No parrots were reported euthanized for behavioral reasons or because their owners no longer wished to care for them.

These numbers are consistent with the euthanasia policies reported by veterinarians. 85% of veterinarians reported that they would only utilize euthanasia in cases of serious medical conditions. 2% indicated that they would euthanize companion parrots in the absence of serious medical problems if serious behavioral problems existed, and less than 1% indicated that they would perform euthanasia in the absence of serious medical problems if the owners no longer wished, or were no longer able, to care for their parrot.

Humane Organizations and Parrot Welfare Organizations were asked a slightly different set of questions about their policies regarding euthanasia. 54% of Humane Organizations and 54% of Parrot Welfare Organizations reported that they would have a parrot euthanized if it had serious medical problems. 16% of Humane Organizations indicated that they would euthanize a parrot if they did not have the space or resources to care for it, or if they determined that the parrot was not adoptable, while none of the Parrot Welfare Organizations reported similar policies. 20% of Humane Organizations and 43% of Parrot Welfare Organizations reported that they would never euthanize a companion parrot.

Characterizing the Current Population of Relinquished Parrots:

In order to gain more information on the current population of relinquished parrots, we asked all respondents a series of census questions. The data provided in the census allows us to better understand the relinquished population currently in the care of survey respondents.

Census Results:

Respondents reported a total of 5,382 relinquished parrots currently in their care. Of these, a total of 3,080 were in permanent care situations with the respondent (meaning that these parrots were not available for placement in new homes). Of the relinquished parrots that were considered permanent residents in their current situation, 45% were housed at Parrot Welfare Organizations, 40% were housed with individuals, and 8% were housed with breeders.

The remaining 2,302 parrots currently in the care of respondents were indicated to be either immediately available for placement (1,959), or expected to become available for placement in the next 6 months (343).

Of those that were currently available for placement, respondents indicated that 973 were best suited for placement in private homes as pets. Of those that were best suited for placement in private homes, 60% were currently housed with Parrot Welfare Organizations, 16% were housed with individuals, and 5% were housed at stores.

Of the relinquished parrots currently in the care of respondents, 36% were female, 44% male and 20% of unknown gender. The average age of these parrots was 8, with a range from 1 to 52 years old.

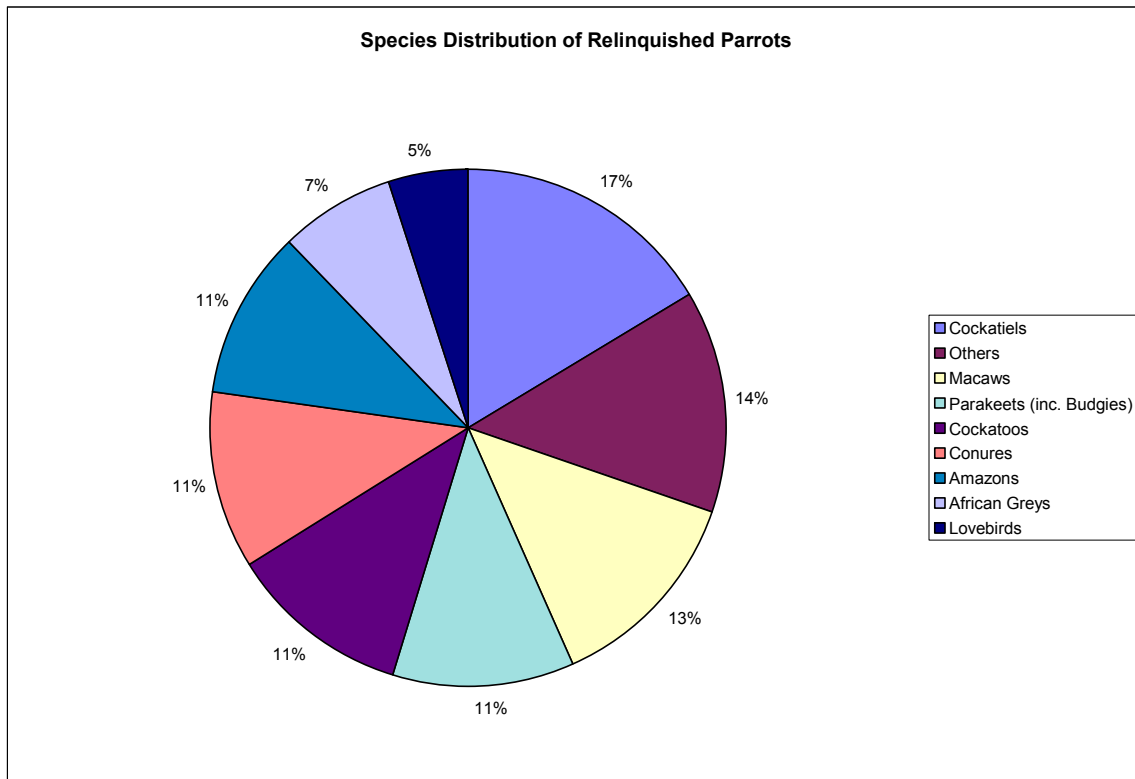
21% of these relinquished parrots had been in the care of the respondents for less than 6 months, 17% for between 6 months and 1 year, 28% for between 1 and 3 years and 33% for three years or greater.

Acquisition of Relinquished Parrots:

Respondents were asked to indicate how they obtained the relinquished parrots currently in their care. For all respondents, 69% of the relinquished parrots currently in their care were given to them (or their organization), 16% were abandoned with the respondent, 15% were purchased by the respondent. For stores in specific, 25% of the relinquished parrots currently in their care were brought to them for sale on consignment.

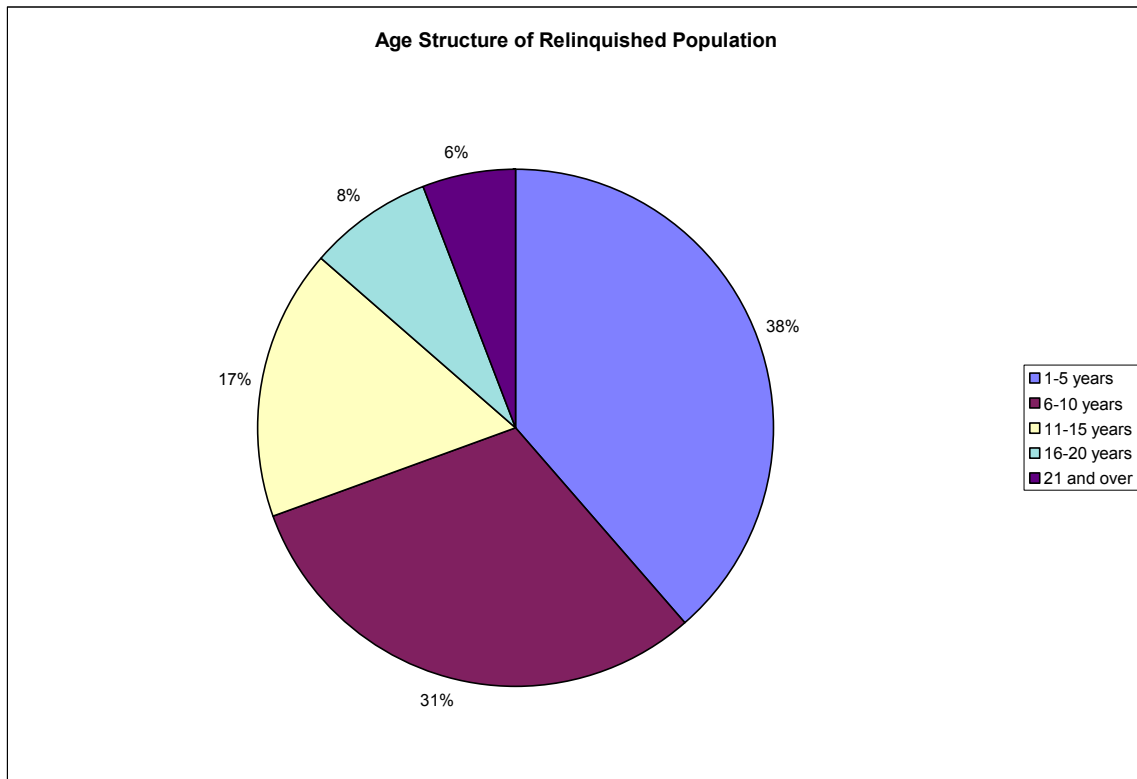
Species Composition of the Relinquished Parrot Population:

Respondents were asked to indicate the species of the relinquished parrots currently in their care. The figure below shows the distribution of species groups for all the relinquished parrots reported (both those available for placement and those not available for placement).



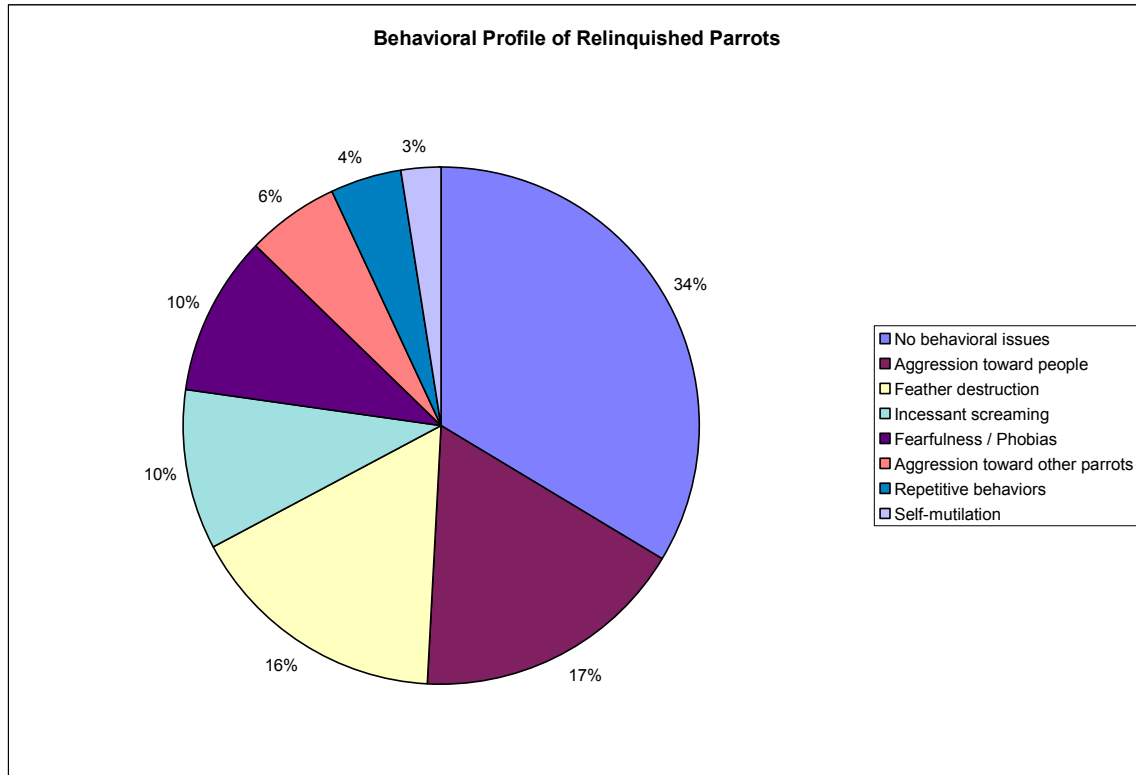
Age Structure of the Relinquished Parrot Population:

Respondents were asked to indicate the age, if known, of the relinquished parrots currently in their care. The figure below shows the distribution of behavioral characteristics for all the relinquished parrots for which the age was known (both those available for placement and those not available for placement). Age was unknown for 28% of the total population.



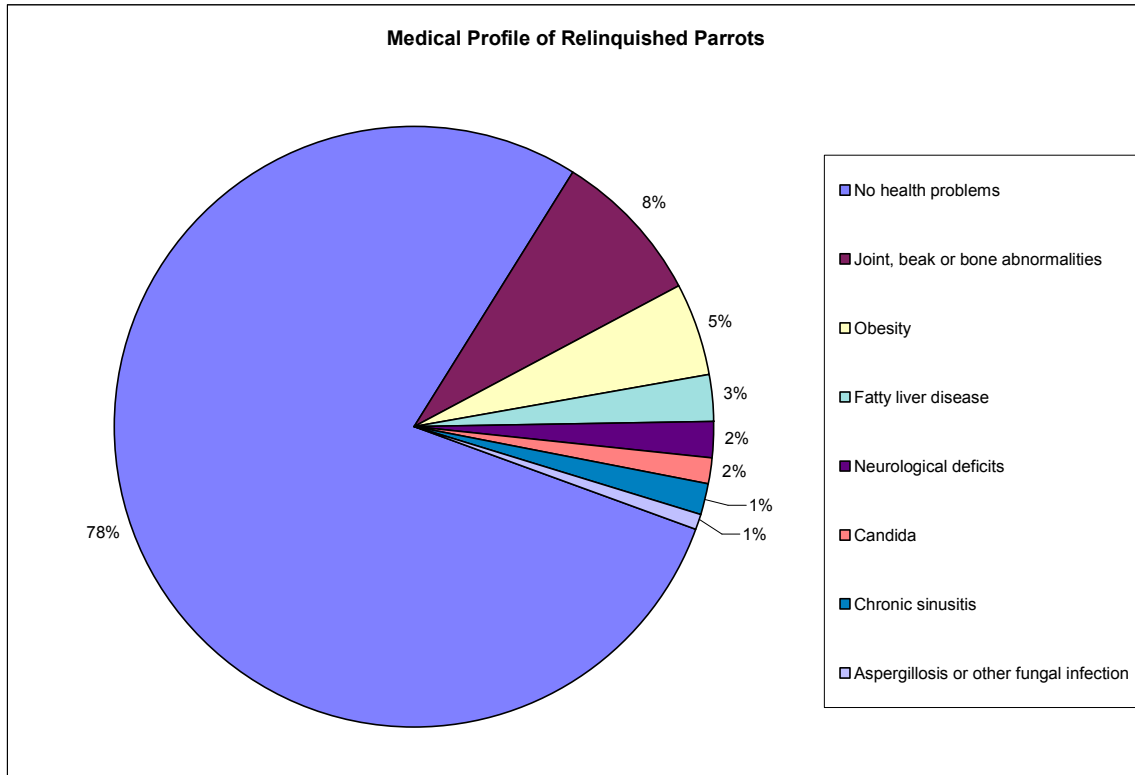
Behavioral Characteristics of the Relinquished Parrot Population:

Respondents were asked to indicate what undesirable behaviors, if any, were performed by the relinquished parrots currently in their care. The figure below shows the distribution of behavioral characteristics for all the relinquished parrots reported (both those available for placement and those not available for placement).



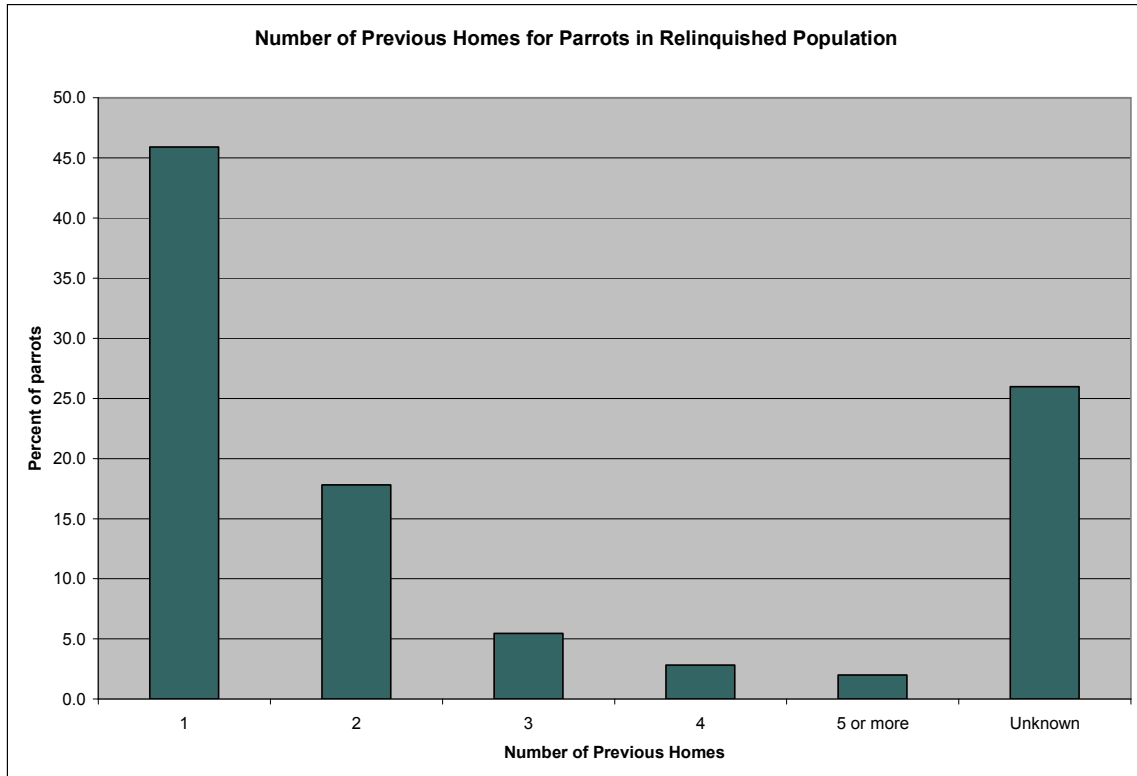
Medical Characteristics of the Relinquished Population:

Respondents were asked to indicate what medical conditions, if any, afflicted the relinquished parrots currently in their care. The figure below shows the distribution of medical conditions for all the relinquished parrots reported (both those available for placement and those not available for placement). All other medical conditions were reported at less than 1% of total population.



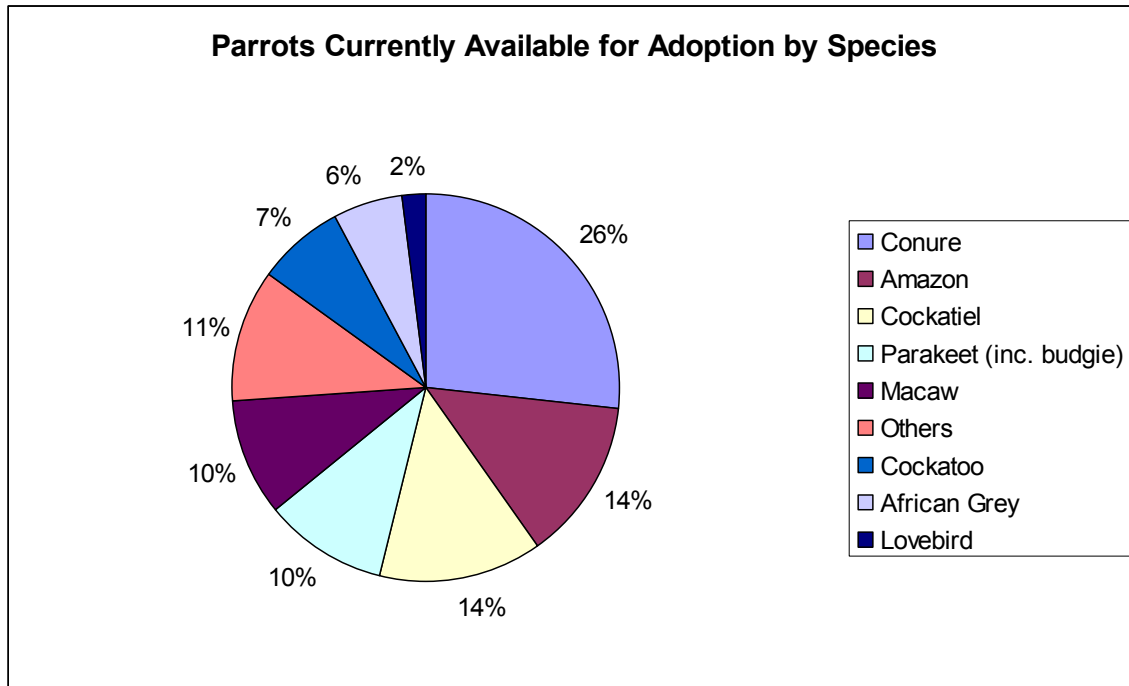
Ownership History of Relinquished Parrots:

Respondents were asked to indicate the number of previous homes had by relinquished parrots currently in their care. Respondents were given the following instructions to determine the number of ‘previous homes’: Count only the homes this parrot had where it was a companion/pet. For the purposes of this survey, the locations where the parrot was born or sold from do not count as previous homes, unless the parrot was a companion/pet in these situations. For the purposes of this survey, shelters, rescues, or other temporary housing situations also do not count as previous homes.



Characteristics of the Relinquished Parrots Available for Adoption:

A sub-set of the total respondent pool (N=521) elected to complete a more detailed census of the relinquished parrots currently in their care. The figures below display the species frequencies of those parrots identified as currently available for adoption.



It is interesting to note the trends in species representation in the three populations of relinquished parrots. For example, Cockatiels make up 25% of the population of relinquished parrots accepted in the past 12 months, 17% of the population of relinquished parrots currently in the care of respondents, and 14% of the population of relinquished parrots currently available for adoption. Parakeets make up 18% of the population of relinquished parrots accepted in the past 12 months, 11% of the population of relinquished parrots currently in the care of respondents, and 10% of the population of relinquished parrots currently available for adoption. This trend suggests that while Cockatiels and Parakeets make up a large proportion of the relinquished parrots were accepted by respondents, they are successfully placed in new homes, at a rate that decreases their representation in the population of parrots currently in need of homes.

On the other hand, Conures make up 10% of the population of relinquished parrots accepted in the past 12 months, 11% of the population of relinquished parrots currently in the care of respondents, and 26% of the population of relinquished parrots currently available for adoption. Amazons follow a similar pattern, they make up 8% of the population of relinquished parrots accepted in the past 12 months, 11% of the population of relinquished parrots currently in the care of respondents, and 14% of the population of

relinquished parrots currently available for adoption. This suggests that placement of Conures and Amazons is more difficult than for other species and occurs at a rate that increases their representation in the population of parrots in need of homes.

Conures are a particularly interesting example because they are much more highly represented in the population of parrots available for adoption (26%) than they are in the population of permanent residents (9%). This indicates that Conures are not only difficult to place, but also less desirable than many other species as permanent residents. This combination of facts suggests that Conures are a species group that should receive increased attention with respect to behavior, care, and patterns of relinquishment.

Conclusions:

Survey-based research projects are the most frequently used tool for collecting data on companion animal population dynamics. Results from these projects can be very helpful in developing an understanding of issues relating to ownership and relinquishment, but because these results are based on only a sample of the total population of interest, care should be taken to interpret such results conservatively. This caution towards conservative interpretation is especially true for internet-based surveys where respondents are self selected, such as is the case with the NPRRP. While the data presented here provide excellent insight into the issue of parrot relinquishment within the respondent population, care should be taken to avoid using these data to extrapolate beyond the boundaries of the current study.

One of the limits we faced as we developed this project was a lack of available information on the population of individuals, groups and organizations that participate in accepting, caring for, and placing relinquished parrots. The only respondent group for which we had a good estimate of the total population of possible respondents was Parrot Welfare Organizations. Our list, which we believe was nearly comprehensive, had a total of 110 organizations. Through the course of the project we learned that 11 of these organizations were no longer in existence. We received responses from 85 Parrot Welfare Organizations, which yielded a response rate of 86%.

With respect to other respondent groups, estimation of the total population was not possible, and without knowledge of the greater population, we were unable to utilize sampling techniques that would yield a representative cross section of the total population. Our approach to this limitation was to cast a wide a net and try to reach out to as many potential respondents as possible. While we could have limited our survey scope to those organizations we had identified as parrot rescue, sanctuary, or welfare organizations, this would certainly have limited the usefulness of this survey. As was demonstrated in the Survey of Current and Former Parrot Owners, only a small fraction of respondents utilized these organizations when relinquishing their companion parrots. In fact, our largest respondent group was that of unaffiliated individuals who have taken in relinquished parrots in the past, or are currently involved with accepting and placing

relinquished parrots. A more focused survey would have missed this influential group. Thus, in addition to collecting data on the dynamics of the companion parrot population the NPRRP serves the purpose of helping to define the population of individuals and organizations involved with parrot relinquishment. Both of these results will be of significant use to future survey-based studies on this topic.

Survey respondents reported an intake of 5,391 relinquished parrots in a 12 month period. In the same 12 month period, 3,527 parrots left respondents' care either through placement or death. Thus, for the 12 month period, there was a 65% disposition rate and a 61% placement rate (excluding deaths). However, it is not the case that the remaining 35% of relinquished parrots accepted in that period (those that were not placed and did not die) are currently available for placement in private homes. In order to understand the numbers of parrots that are available for placement with new owners, we must look at the composition of the population of relinquished parrots currently in the care of respondents.

Parrots are a unique case among companion animals in that many of the organizations that accept relinquished parrots provide permanent care and do not make many, or all, of the parrots they accept available for adoption. Thus, once a relinquished parrot is accepted by one of these organizations, it becomes a permanent resident and is removed from the pool of relinquished parrots available for placement in new homes. Our survey results indicate that of the total number of relinquished parrots currently in the care of respondents, 57% (N=3,080) fit this description. The remaining 43% were identified as either immediately available for placement, or expected to become available for placement in the next 6 months. Of the parrots that were identified as immediately available for placement, 50% were identified as best suited for placement in private homes as pets.

Overall, the population dynamics for a 12 month period within the respondent population is as follows:

IN	OUT	DIRECT TRANSITION	
Intake = 5,391	Placement = 3,321 Death = 206	IN = 2,001 OUT = 2,001	
Total Relinquished = IN + DIRECT TRANSITION IN			= 7,392
Total Placed = (OUT-Death) + DIRECT TRANSITION OUT			= 5,322
Total Death			= 206
Remainder			= 1,864

CURRENT POPULATION

Permanent = 3,080
Available = 1,959

$$\begin{aligned} \text{As Pets} &= 973 \\ \text{Total Current Population} &= \text{Permanent} + \text{Available} &= 5,309 \end{aligned}$$

In addition to intakes and placements, respondents indicated that they assisted in the direct transition of 2,001 parrots from relinquishers into new homes. These parrots were not included in the intake calculation. By the nature of the transition, 100% of these parrots were placed in new homes, so 2,001 was added to both sides of the equation. Thus in the 12 months of the study, 7,392 parrots were relinquished and 5,322 parrots were placed in new homes. The remainder of the parrots enter the Current Population of relinquished parrots in the care of respondents. There is not a direct correlation between the remainder and Current Population because parrots in the Current Population category could have been obtained prior to the 12 months of data used in the IN and OUT calculations.

The current population at the time of the survey totaled 5,309 parrots. According to the above calculations, 1,874 parrots were added to the current population during the 12 months of the survey which represents 35% of this total population. The current population is comprised of both permanent residents (not available for placement) and adoptable residents (available for placement). Of the 1,874 parrots added to the current population in the 12 months of the study, we do not know how many became permanent residents with respondents and how many became available for placement. However, we do know that 57% of the total current population are permanent residents while 43% are adoptable residents.

While it might be tempting for some to conclude that based on the results from the 12 months covered by the survey, the population of relinquished parrots in the care of respondents will grow by 35% each year in subsequent years, it is not appropriate to make this extrapolation. Various factors such as the numbers of parrots relinquished by owners, or the number of parrots placed in new homes are likely to change from year to year (in either direction), and thus, could change the dynamics of this population significantly. It is also impossible to determine if the nearly 60% to 40% ratio of permanent residents to adoptable residents will continue to hold over time. Of the total population of permanent residents, 45% are housed at Parrot Welfare Organizations. However, 57% of the Parrot Welfare Organizations surveyed indicated that they have waiting lists for intakes, and 38% indicated that they have had to turn away parrots in the past 12 months. If spaces available for permanent residents at these organizations become increasingly limited, then the ratio of permanent residents to adoptable residents in the overall population may shift. However, it remains to be seen if an increase in the number of adoptable residents can be offset by an increase in the number of spaces available in private homes or other permanent situations such as breeding colonies.

One of the key issues at the forefront of debate over parrot ownership and relinquishment is the question of parrot overpopulation. Specifically, there is a keen interest in determining if the number of companion parrots being produced in this country is outpacing the number of available homes. While our results demonstrate that there is not

a perfect balance in the numbers of relinquished parrots to placed parrots, we can't jump to any conclusions about overpopulation based on these data. Unfortunately, the assessment of companion animal populations, across species, is plagued by a lack of consensus as to how overpopulation is defined and thus, how it should be measured.

Thus, rather than attempt to make a determination of whether or not there is an overpopulation of parrots, it seems more constructive to address the issue that leads to relinquishment in the first place: the breakdown of the bond between the parrot and its owner. The breakdown of the bond between a parrot and its owner can be understood, to a certain extent, by examining the factors that contribute to people making the decision to give up their companion. In this survey, 17 reasons received at least 1% of the total responses for reason given at relinquishment. These 17 reasons can be grouped into three categories: Behavioral factors (parrot factor), Health and Personal factors (owner factor) and Compatibility factors (parrot x owner factor).

Behavioral Factors	Health/Personal Factors	Compatibility Factors
Biting/Aggression	Moving	Not enough time
Noisiness	Having a baby	Doesn't get along with family members
Feather Destructive behavior	Physically unable to provide care	Not enough space
Difficult to train	Medical issues or illness in the family	Not compatible with other parrots in the house
	Allergies	Cost of care
	Retirement	
	Marriage/Divorce	
	Death	

In total, 51% of the reasons cited were Compatibility factors, 47% were Health and Personal factors, and 43% were Behavioral factors. The total sums to more than 100% because more than one reason may have been provided for each parrot relinquished. The one area where we cannot easily work to reduce cases of relinquishment are cases that are based either entirely, or primarily on Health/Personal factors. In these cases, the bond between the owner and the parrot may have continued to be very strong up to the point of relinquishment. Perhaps some of these cases could have been avoided with additional support or education, but in general a certain amount of relinquishment due to H/P factors is unavoidable.

What we should be more concerned with are the relinquishments that are based either entirely, or primarily on behavioral or compatibility factors. Relinquishments of this nature are due to a breakdown of bond between the owner and the parrot which might be avoided. Both of these categories involve some aspect of the parrot's behavior, or its care requirements, which was unexpected, unwanted, or unattainable by the owner at the time of relinquishment.

It appears that what is needed is a more comprehensive and effective approach to educating potential parrot consumers prior to their purchasing a parrot, and supporting parrot owners once they have made the decision to bring a parrot into their lives. In addition, it is clear that certain behavioral factors (and perhaps compatibility factors) that contribute to parrot relinquishment are closely related to the early experience of the parrots. It is important to note that if parrots are produced, housed, and cared for in ways which do not support optimal physical and behavioral development before they even reach their new owner, they may be set up for failure in this relationship despite the best efforts of their keepers.

The NPRRP offers the first factual account of parrot relinquishment and companion parrot population dynamics and is an important step forward for the avian community towards a better understanding of these complex and important issues. In addition, this project was completed with the collaboration of a diverse group of individuals who were previously completely at odds over the way to approach this subject. The NPRRP built a consensus in the parrot community which sets the foundation for further research in this field. Further research is certainly needed to fully develop our understanding of parrot population dynamics and the issue of relinquishment. In addition to survey-based projects, longitudinal studies, which would allow researchers to follow parrots and owners over the course of their relationship, would be particularly useful. Parrot purchasers could consent to participate in the study at the time of purchase and could be contacted periodically to monitor the development, and perhaps, the deterioration of the parrot/owner bond.

The fact of the matter is that at this time there are relinquished parrots in need of homes in this country. Within our sample population, they number just over 2,000. While overall, the placement rate of relinquished parrots for the 12 month period was significant (just over 60% not including those that became permanent residents with respondents); the flow through of relinquished parrots through the system and into new homes is not absolute. Thus, it is important to continue examination of the issue of parrot relinquishment with particular attention to species where placement seems to be difficult, behavioral issues that are commonly cited as problematic, and compatibility issues that might be addressed through increased education and support.