A STUDY ON MANAGEMENT PRACTICES IN PET BIRDS IN THRISSUR DISTRICT

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Abstract

A detailed study was undertaken in the management practices of pet birds in relation to breeding, health care, welfare and marketing in ThrissurDistrict of Kerala. A detailed questionnaire was prepared and data collected from 35 aviculturists to operationalize the study. In this study, identification of sex in birds is a major problem faced by bird owners. Most of the bird owners identified sex by their own experience.Deoxyribo nucleic acid (DNA) sexing is the scientific method of sex identification. Almost all owners used birds for breeding purpose throughout the year. Age at which the birds were used for breeding varied with species. Natural method of incubation was followed by all the owners. Mortality was reported more in rainy season. Most pet birds spend full time in the cages. De-worming and vaccination were the only health management practices followed. The owners gave timely medications to common diseases of the birds. The birds were very friendly and liking towards their owners. All birds in this survey were comfortable with their managemental practices. None of the owners had given any training to the birds.

Key words: *Pet birds-management practices-breeding-healthcare-welfare-marketing*

In recent times, rapid transformation of the socio-economic and demographic fabric of the state of Kerala has resulted in an increased importance of pet birds and animals. Rearing of pet birds serves as an important societal measure for stress alleviation, besides opening up new avenues for employment and income generation among unemployed youth. For these reasons, there has been an increased interest in this sector. Pet birds have many distinct features such as attractive colours and the fact that they make good companions both of which have enhanced their popularity. Moreover, there is a wide range of over 400 varieties of pet birds to choose from.The choice extends from Love birds, Budgerigars, Cockatoos, Macaws, Amazon parrots, Pigeons, Cockatiels, Finch, and the Parakeet to mention a few. Birds have been kept as the pets from time immemorial. The earliest records of birds being kept by the Greeks can be inferred from their ubiquitous presence in the history of lekythos paintings (Lazenby, 1949). Quite a number of people

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have gradually made an entry into this segment for various reasons.

However, there is a paucity of information in the management practices followed by bird owners in the aspects of breeding, health care, welfare and marketing as well as the constraints faced by them. An understanding of these parameters would be beneficial in developing and designing suitable strategies for intervention in this sector which would go a long way in ensuring a sustainable livelihood option for budding entrepreneurs as well as maintaining minimum standards recommended for the wellbeing of these birds. The present study made a systematic enquiry into the subject of bird care including routine breeding practices, proper health care, welfare issues, sourcing of birds and marketing strategies followed in pet birds by their owners. Based on the aforesaid discussion, the present study was thus undertaken with the objectives to explorethe breeding management, health care, welfare andmarketing strategies followed by pet owners.

Review of Literature

Harper (1986) found that during cold weather, laying birds were more at risk from egg-binding and so breeding season should be restricted in outside accommodation to the warmer months of years in temperate climates. Conway and Martin (2000) demonstrated that ambient temperature commonly influence avian incubation behaviour, embryonic development and adult metabolism in birds and also the correlations between ambient temperature and bout duration are equivocal.Fox and Millam (2004) observed that Hand-reared parrot chicks are adorable and fearless. Hand reared cocktails show abnormal sexual and habitat imprinting. Neonatally handled birds that remain in the nest have much more contact with parents and siblings than they do with humans; it is also likely that they will show normal reproductive behaviour at maturity.Mertens (1997) observed that feather picking is a behavioural problem seen in pet birds. Birds chew or pull feathers in the area of the breast or thigh. The birds presented for feather picking were generally kept under good housing conditions, especially providing of intra and inter-specific social contact, dietary management, cage size and daily exercise. Management factors play a major role in the development of feather picking behaviour.

According to Harper and Lowe (1998) measurement of hematologic parameters is an important part of evaluating health status in avian species. Heterophils are generally considered to be the most abundant white blood cell in budgerigars and its results indicated that lymphocytes were more prevalent.Nett and Tully (2003) reported that feather picking is seen in many bird species, but psittacines seem to be especially prone to this problem. Chronic feather pickers lack normal insulation and are more prone to develop stress-induced disease. Feather picking is not a specific disease but rather a consequence of an underlying disorder. Psittacosis, also known as parrot fever and ornithosis, is a bacterial infection of humans that can cause severe pneumonia and other serious health problems. Among caged, nonpsittacine birds, infection with Chlamydiaceae organisms occurs most frequently in pigeons and doves. Avian chlamydiosis is less frequently diagnosed in canaries and finches reported Smith *et al.* (2005).

Meehan*et al.* (2003) observed Iso-sexual pair housing resulted in a more active and diverse behavioural repertoire. Paired parrot did not develop stereotypic behaviour. Pair housing helps to improve fear response to novel objects. Pair housing can significantly improve environmental quality and positively affect the welfare of young captive parrots.Leong (2008) opined that highly pathogenic avian influenza is a serious poultry disease and countries all over the world adopt various strategies best suited to their needs and poultry production systems to prevent and control highly pathogenic avian influenza (HPAI).According to Nijman (2010), total of 1.04 million birds were exported from Southeast Asia, 2,69,000 from the wild and 7,72,000 from captive-breeding facilities. Especially from 2000 onwards the vast majority of birds were reportedly derived from captive facilities. After an initial increase from 1998 to 1999, exports of birds from Southeast Asia has seen a progressive decline, to such an extent

that exports of birds in the years 2004–2007 are virtually non-existent.

Soorea *et al* (2008) conducted a survey on commercial businesses selling live animals of wild and domesticated species referred to as pet shops covering all of the United Arab Emirates (UAE). It is evident from the survey that birds are the most popular species in the pet trade, followed by reptiles and marine/freshwater species for aquaria. Pet shop staff in UAE were asked if they were familiar with Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the species covered by the Convention. Sixty per cent of the subjects surveyed expressed awareness compared to 40% who claimed to be unaware of CITES. There was a general understanding that certain species have to be traded with special permission or permits.

Materials and Methods

A study on the present management practices followed by pet bird owners in breeding, health care, welfare and marketing in pet birds was taken up in ThrissurDistrict of Kerala. Data was collected from pet bird owners in their own premises by personal interview using a pre-tested questionnaire.ThrissurDistrict was purposively selected for the study. Snowball sampling was resorted to for selection of the respondents. A total of 35 aviculturists were thus selected for the study.The variables for the study were selected based on their relevance to the objectives, through a thorough review of literature as well as by discussion with subject matter experts. The variables thus selected included management practices such as Breeding, Health care, Welfare and Marketing.

Result and Discussion

The results of the present study were obtained under the following headings;

Management practices followed by pet bird owners

1. **Breeding of pet birds**

In Breeding of pet birds, the various methods used in sex identification, the purpose for which birds are used, the mode of incubation and mortality details were studied (Table 1).

Various methods were followed to identify sex of birds which is a very difficult task to bird owners. Most of them (40%) identified sex by their own experience. In other cases, 17.14 per cent sex identification was done through DNA sexing method and was mainly done in Hyderabad. About 11 per cent identified the sex by physical appearance and 6 percent identified by size of the bird. Very few detected sex of the birds by their sound produced. Nearly, 25.71 per cent people used almost all the above said techniques to identify bird's sex.

In this study almost all owners used birds for breeding purpose. Age at which the birds were used for breeding varied with species. All the owners selected for the study bred the birds throughout the year.

Table1. Breeding details of pet birds

Details	Category	Frequency	Percent
Method of identification of sex in birds	Physical appearance	4	11.42
	Size	2	5.72
	DNA sexing	6	17.14
	Experience	14	40.00
	All of these	9	25.71
Birds for breeding	Yes	35	100
Mode of incubation	Natural	35	100
Age of mortality	0-2years	27	77.15
	No mortality	8	22.85

Natural method of incubation was followed by all the owners which are the best method of incubation. About 77.15 per cent of owners reported that there was mortality of chicks at 0-2 years may be due to lack of attentionto birds. All the owners used their birds for breeding as soon as they got matured. But this was not good for health of birds because the sexual organs were not fully developed when the birds became sexually matured and so a gap should be given before beginning breeding.

Table 2. Average number of eggs per bird per month

Category	Number
Pigeons	1-2
Budgerigars	4-6
Cockatiels	2-8
Finches	2
African lovebirds	3-4
African grey parrot	2-5

Pet birds such as Budgerigars laid 4-6 eggs, Cockatiels laid 2-8 eggs, African lovebirds laid 3-4 eggs and African grey parrot laid 2-5 eggs over a month period.

Out-source were not used by any of the breeders as the birds were purchased in pairs. Interval between two clutches and incubation period of eggs of different species of birds were in agreement with the findings of (Harper, 1986 and Vriends,1989).But the quickly increasing number of bird breeders could be a problem. A growing number of people adopted exotic breeds as pets and the popular choices were African grey parrots, Australian cocktatoos and South American macaws. Donald Brightsmith*et al*.(2004) opined that results may not be duplicablewith all species.The current study shows that captivebreeding and reintroduction can be used to re-establish psittacines in areas from which they have been extirpated.

2. Health care of pet bird

In pet birds, the preventive medications used, birds engaged for other activities and time spent by birds in cages were dealt (Table 3).

The health management practices followed by the pet bird owners are detailed in Table 2.Almost all birds were apparently healthy and active without any diseases at the time of survey. De-worming was the only health management practices followed by majority of pet owners (91%). Vaccination was given by 17 per cent of bird owners. Only less than 10 per cent of the bird owners are giving vitamins to their pet birds. Nearly 28.6 per cent of bird owners use birds for other activities like exhibition, circus, bird shows etc. Most of the owners were aware of diseases which affect birds such as pox, pigeon malaria, coccidiosis,

Table 3. Health care details of birds

Details	Category	Frequency	Percent
Preventive medication for birds	Deworming	32	91.4
	Vaccination	6	17.1
	Vitamins	3	8.6
Birds used for other activities	Yes	10	28.6
	No	25	71.4
Time spent in cage	1-5hours	3	8.6
	5-10hours	2	5.7
	Full time	30	85.7
Annual veterinary expenditure(Rs)	<1000	11	31.4
	1000-5000	5	14.3
	5000-10000	4	11.5
	>10000	15	42.9

salmonellosis, and cancer. All the owners reported that mortality was more in rainy season. When the birds are diseased most of the owners provided timely treatment. It was observed that the faeces were normal in colour and consistency in healthy birds but in diseased condition abnormalities werefound.

Almost 85.7 percent of pet birdsspend full time in the cage.Nearly 42.9 per cent of owners spent more than ten thousand rupees towards annual veterinary expenditure for their birds whereas about 31.4 per cent of owners werespending less than one thousand rupees.Very few of owners were consulted veterinarians for health check-up. Vaccines for pet birds were not available in Indian market. It was very expensive to buy imported vaccines and it was not practical. All the owners were aware of common medicines for almost all the diseases and most of them were giving timely treatment to the birds.

The owners rearing fan tailed pigeons were practicing tail trimming as a cosmetic treatments because when the weight of the tail increased the tail deviated to one side and affected the beauty and marketing value of the pigeons.Kathleen*et al* (2005) warns to aware all persons in contact with infected birds or contaminated materials about the nature of the disease. Instruction to wear protective clothing, gloves, a disposable surgical cap and an appropriately fitted respirator18 with N95 or higher rating while cleaning cages or handling infected birds. Also isolation should include housing in a separate air space from other birds and non-caretakers. Isolate birds, including those that have been to shows, exhibitions, fairs, and other events, for at least 30 days, and test or prophylactically treat them before adding them to a group.

They also recommend to position cages to prevent the transfer of faecal matter, feathers, food and other materials from one cage to another.The bottom of the cage should be made of a wire mesh. Litter that will not produce dust (eg. newspapers) should be placed underneath the mesh. Clean all cages, food bowls, and water bowls daily. Soiled bowls should be emptied, cleaned with soap and water, rinsed, placed in a disinfectant solution, and rinsed again before reuse. Between occupancies by different birds, cages should be thoroughly scrubbed with soap and water, disinfected, and rinsed in clean running water. Exhaust ventilation should be sufficient to prevent accumulation of aerosols and prevent cross-contamination of rooms.

3. Training

Only 23 per cent of owners attended training for 2 to 3 days under different associations based on pet bird management and the remaining 77per cent of bird owners did not attended any specialized training.The birds were very friendly and showed liking towards their owners. When approached by a stranger African grey parrot and pheasants reacted by making sounds whereas pigeons did not respond. Budgerigars tried to get inside the nest boxes when approached.

According to Brien and Villm (1988),nutrition in pet birds is a complex science thatoffers many difficult problems to aviculturistsstroughout the world. Poornutrition of pet birds is a common occurrence andeducation of the aviculturist is important.A pet is often regarded as a family member by its ownerand a person may develop strong relationships with animalsthroughout his or her lifetime. Pet interactions and ownershiphave been associated with both emotional and physical healthbenefits (Milani, 1996; Adams *et al*., 2004).

Fig 1. Training attended by pet owners

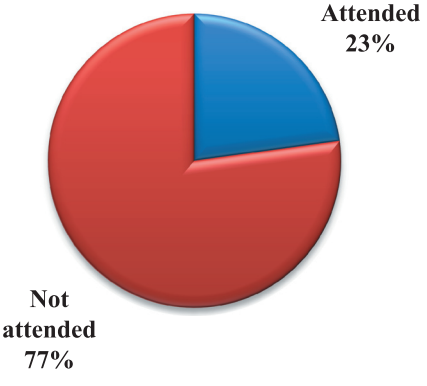
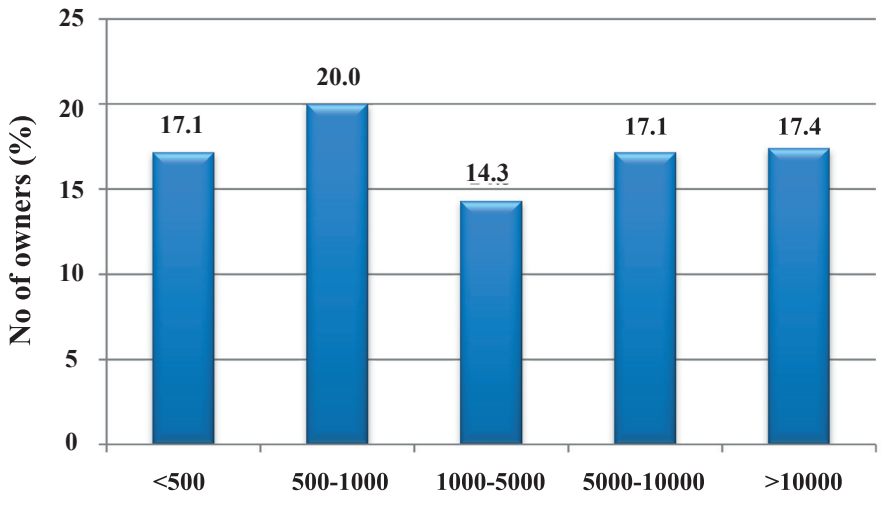


Fig. 2. Distribuion based on Selling price of pet birds



4. Welfare

In welfare of pet birds, their feeding and watering practice, cage cleaning by owners and the basic needs ensured by pet bird owners were studied(Table. 4).

Most of the pet bird owners gave attention to welfare of the birds. Almost 94.20 percent owners fed their birds properly. Clean drinking water was provided by 85.72 percent of them. All the owners properly cleaned the bird's cages. Nearly 82.85 per cent of owners always cleaned the cages.About 77.15 per cent of owners ensure basic needs for birds in providing water and cleaning cages. All birds in this survey were comfortable with their managements. Less than 5 per cent of owners were using disinfectant for cleaning. Phenolic compounds could also be used to clean cages. Almost all owners properly fed birds and provided good management practices for birds.

The body mass and flying behaviour of budgerigars weresignificantly influenced by the type of housing and theseeffects could have implications for the welfare of thesebirds. Obesity was a common problem in captive birds and wasassociated with detrimental health effects and a shortenedlifespan (Wedel 1999). According to Jetz*et al* (2007), since bird was one of the most sensitive indicators of ecosystemhealth, both its habitat range and migration route couldbe affected by global climate change and the most directimpacts came from human activities and global warming.

5. Marketing of pet birds

Most of the marketing was done through internet. Marketing was also done through shows and exhibitions conducted by different associations. Different agents were also involved in the sale of birds. Sale price of birds are shows in Fig. 2.

About 20percent of pet bird owners sold the birds between Rs. 500-1000. Almost 35 per cent of the pet bird owners sold them for more than Rs. 5000.Skinner *et al.*(1997) showed that age at which budgerigars can be considered asold and is not well documented. Budgerigars are mature at 6 to 8 monthsof age; their average life expectancy is anecdotally reportedas 8-10 years. But this is not associated with any obviouschanges in either physical appearance or measured nutritionalparameters such as metabolizable energy requirements.

Table 4. Welfare aspects of the birds			
Details	Category	Frequency	Percent
Proper feeding	Yes	33	94.20
	No	2	5.80
Adequate watering	Yes	30	85.72
	No	5	14.28
Cage cleaning	Always	29	82.85
	Often	5	14.28
	Sometimes	1	2.87
Basic needs ensured	Always	15	42.86
	Often	17	48.57
a. Feed	Sometimes	3	8.5
b. Water	Always	27	77.15
	Often	8	22.85
c. Cage	Always	27	77.15
	Often	8	22.85

Conclusion

In this study, all of the birds were active and healthy without any diseases at the time of survey. Identification of sex in birds was a major problem faced by bird owners. An experienced bird keeper can identify the sex of birds. DNA sexing is the scientific method of sex identification which was practiced by few owners. Almost all owners used birds for breeding purposethroughout the year. Age at which the birds were used for breeding varied with species. Natural method of incubation was followed by all the owners. Mortality was reported more in rainy season.Most pet birds spend full time in the cage. De-worming was the only health management practice followed by the rearers.The owners gave timely medications to common diseases of the birds. The birds were very friendly and liking towards their owners. All birds in this survey were comfortable with their managemental practices. Very few owners attended training. Areas of interventions are needed in almost all areas of veterinary services likebreeding, health management practices, welfare and marketing of birds.

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