

Diet Management for Training and Enrichment

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Pet Parrot Pointers

Introduction

In our last issue of *Pet Parrot Pointers* we looked at how animal trainers and parrot teachers use 'approximations' in developing an effective sequence of reinforcement and learning. However, many pet parrot owners often share their frustrations with me about their parrot not being motivated to receive a food treat as reinforcement. They then struggle to find ways to establish and reinforce a sequence of approximation-based learning. So how do you achieve a balance in the delivery of your companion parrot's daily diet so that you can maximise your opportunities to deliver food reinforcers and achieve your behavioural goals? In this issue we will take an in-depth look at what diet management for training and enrichment is all about.

Defining Diet Management

Diet management is poorly understood and frequently misrepresented in the companion parrot community. Diet management involves the considered delivery of food throughout the day. Managing the diet does not result in the complete withdrawal of food. Essentially, the daily food intake of the parrot remains the same as when an otherwise ad-lib access to all available food is provided. The only difference is that different foods may be offered at different times of the day or in contexts other than just being placed in a bowl. As one example, the parrot may be fed almost all of its daily diet at the regular time, but some or all of an identified food item of particularly 'high value' to the individual might be offered only in association with training sessions or learning opportunities. If such sessions are not scheduled for the day then these foods are simply offered in a free-feed context along with the rest of their diet. Diet management can be as complex as delivering carefully measured food portions at specific times of the day for highly trained parrots to simply withdrawing a favoured food item from free-feed access and delivering these during specific interaction sessions with your parrot.

The ethical implementation of any diet management program should ultimately:

- result in an increased state of nutritional health for the parrot
- be consistent with the daily food intake requirements of the individual
- result in the maintenance of a healthy weight range for the bird and
- provide opportunities for the parrot owner to effectively deliver highly valued food treats as reinforcers during training sessions.

Understanding Reinforcement

I would like to set *PPP* readers up with a little theory to support why we often rely on a food treat as the most effective form of reinforcement for parrots. Reinforcement can be defined as 'The procedure of providing consequences for a behaviour that increase or maintain the frequency of that behaviour' (Chance 2006). Reinforcers are, therefore, those consequences that increase or

maintain a behavioural goal that we have identified. Reinforcers can be classified as either 'primary' or 'secondary'.

Primary reinforcers are defined as 'unlearned reinforcers' that stimulate an unconditioned behavioural response. Although food and water are most commonly recognised as 'primary' reinforcers, a number of others can be identified, depending on the animal species. Primary reinforcers, such as food treats, therefore offer a universal appeal as a highly motivating and effective consequence when used in learning sessions.

We also use 'secondary' reinforcers sometimes when training, and these are identified as reinforcers that are dependent on their association with other reinforcers (Chance 2006). Examples of secondary reinforcers often used in the context of working with pet parrots include giving a head scratch, offering verbal praise, or even providing as a reward an enrichment item for the parrot to chew on or interact with. These secondary reinforcers often only become reinforcing in nature due to the development of an association between them and a primary reinforcer. An example might be that head scratches for your parrot become reinforcing due to the link between receiving a head scratch and obtaining a food treat. Secondary reinforcers are often more inconsistent in appeal and potentially create new variables and influences on behaviour, particularly reinforcement in the form of physical affection towards companion animals. However, you can still use

secondary reinforcers as very effective tools to make the delivery of food treats more variable and reduce the dependency of the parrot on receiving food rewards every time you interact with him. Before you can achieve this variability, you first need to identify a suitable and effective primary reinforcer that will enhance the motivation of your parrot to start engaging in the learning sessions that you are keen to initiate.

Identifying an Effective Reinforcer

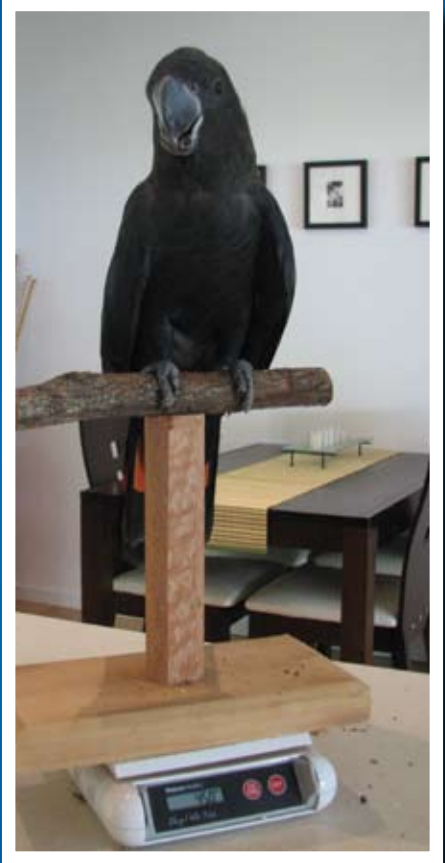
The first step to take when managing the diet of companion parrots to maximise motivation at training times is to identify exactly what food item the parrot finds reinforcing and is keen to interact with its environment to receive. The choice of desired reinforcer is a decision that the parrot makes—not the trainer.

To work out what your parrot is really keen on, simply place a selection of all of the different food types that the parrot would normally eat each day on a bench top or in a bowl in the cage before the usual morning feed. Now watch as your parrot explores the items on offer and make a note of what is eagerly eaten first. In my experience, this isn't always a traditionally favoured item, such as sunflower seeds. I have seen parrots head straight for corn kernels, mealworms, peas or even a favourite nut type in preference to seeds. Our Gang Gang Cockatoos present different levels of motivation toward a range of food items, and this often changes over the course of a year. Lories and lorikeets are not seed and nut eaters, so a



Diet management has its best application in increasing foraging motivation. These Galahs have been provided with a foraging pit stocked with fresh cut grasses, native seeding cones, wattle flowers—and millet seed sprinkled throughout. Wonderful enrichment for ground-foraging parrots!

The choice of primary reinforcer is made by the parrot—not the trainer. This Gang Gang Cockatoo has been offered a range of potential reinforcement treats. And the winner is ... cashews!



Modifications to the diet of your parrot need to be paired with regular behavioural and weight monitoring

small 3ml syringe filled with sweetened nectar mix or diced pieces of a favourite fruit might capture their attention best. Basically, to identify the best primary reinforcer requires an understanding of the individual and careful observations of their feeding preferences and habits.

Maximise the Motivation

Steve Martin uses the classic phrase ‘What’s the motivation?’ when asking parrot owners to reflect on the behaviour of their parrot. This question applies when you have identified a reinforcement treat for your parrot and are still experiencing a lack of motivation in his receiving these during training sessions. If this same food item is freely available in a bowl at the end of the perch then there is little motivation for him to break down whatever barrier may be impeding his progress in establishing trust in you and allowing you to deliver treats to him effectively. This is where you must consider another critical component of a diet management plan—timing of delivery. To maximise the opportunity to deliver food treats to capture learning goals, carefully consider the best time of the day when your parrot is most likely to be motivated to work with you to receive a food reward.

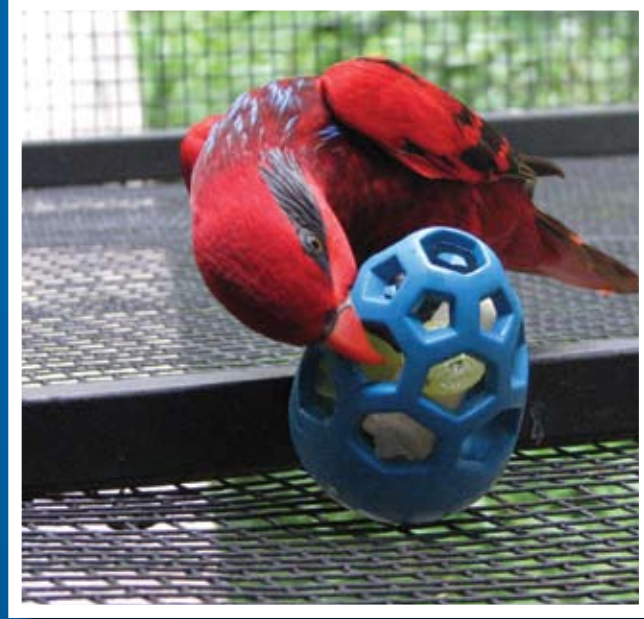
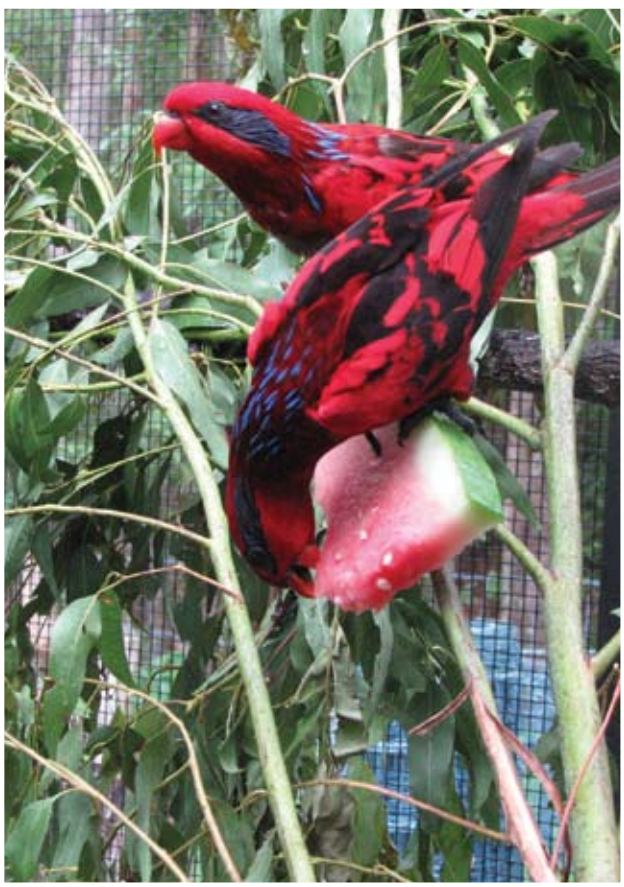
Potential Pitfalls of Diet Management

The major problems encountered with poor application of diet management strategies usually stem from the failure of the parrot owner to maintain regular behavioural observations and weight monitoring of the bird, or from the implementation of inappropriate diet management with parrots at a young age. Nothing sends a shudder down my spine more than when I hear of people being advised to restrict the food intake of a young parrot for the purpose of training.

It is critically important at this point to consider the basic

difference in behavioural responses to hunger most likely to occur when comparing recently weaned and still dependent juveniles and independent adolescents or adults.

When a dependent parrot is hungry, the behavioural response is to sit and solicit interactions and feeding from the parents. This can precipitate a range of opportunities for the inadvertent reinforcement of undesirable behaviours when presented to an inexperienced parrot owner. Significant problem behaviours, such as the development of regressive begging, poor posture, lack of activity and elevated levels of over-dependence can be an absolute disaster for any parrot owner. I have seen the improper application of food delivery with recently weaned or even unweaned parrots for flight training, even in zoos, and this is an example of poor training methodology. The essential difference is that older, independent birds respond by actively seeking out food sources and engaging with their environment to satisfy their needs, while young parrots often wait for the food to come to them. Young parrots that have been recently weaned should, therefore, be provided with an ad-lib access to desirable foods throughout the day. Limiting access to food at this stage in their development can have devastating effects and should be considered unnecessary as a means of capturing and reinforcing simple handling behaviours in most properly raised, weaned and socialised juvenile parrots. It is also important to consider that even with adult birds, limiting food access too severely or the sudden withdrawal of favoured food items can sometimes precipitate problems such as excessive screaming and even aggression around food, if not properly managed. Modifications to the daily feeding regime need to be implemented in much the same way as the philosophy behind the approximation schedules that we discussed last issue—one small step at a time. >



Fruit chunks placed amongst natural branches or foraging toys offer a great diet management option for these lories. Food presented in this way increases activity in captive environments and reduces boredom

Carefully Managing the Delivery of the Reinforcing Food Treat

Once you have identified which food item that your parrot is particularly keen on, then you can consider how to integrate this item into your training schedule. An important consideration here is to reflect on the degree of dependency that your parrot has on the identified food item. Withholding a food item that is actually all or most of what your parrot eats in a day is inevitably problematic. As a rare example, we have a Glossy Black Cockatoo that literally eats two different foods, sunflower seed and corn. Despite numerous conversion trials to a healthier diet with this bird, we have been unsuccessful in getting him to eat a more varied and healthy diet. If we were to only offer sunflower seed to this bird when interacting with him it would quickly result in a hungry parrot who may become over-dependent on interactions with us to satisfy his energy needs, and problem behaviours may start to establish as a result. In difficult cases like this I simply work with the individual at his regular feed times and deliver some of his food by hand as a reward for the interactions that I receive with him and then leave him with the leftovers after the session has ended. The only change from a free-feed provision of the food is in the context of the delivery.

Ensuring that your parrot will actually eat a formulated diet, such as pellets, is a huge bonus in being able to achieve flexibility in your choice and allocation of food treats as reinforcers. Parrots that display a healthy level of behavioural activity and weight when maintained on a diet of formulated food, supplemented with fresh vegetables and small amounts of seeds and nuts, are exponentially easier to train to respond strongly to reinforcement treats that might otherwise be absent from their daily feed. Even though parrots that are maintained on a pelleted diet don't really need that additional seed or nut treat, they always seem to leave room in the tank for it! Developing a daily diet program for your parrot where food treats used for learning sessions are in *addition* to an established healthy and balanced diet should be the ultimate goal.

Applying Diet Management Strategies for Enrichment

Most parrot owners probably consider managing the diet of their bird in relation to training and opportunities for reinforcing desired behaviours. Managing the delivery of the daily food intake of parrots also has excellent benefits when extended to arranging the environment of the parrot to increase foraging motivation. With many of my own birds, my focus is more on increasing foraging motivation than training for novel behaviours. For me, diet management is really about maximising the interest that they have in exploring their enclosure environment. This philosophy applies to parrots in all contexts—indoor pet birds and outdoor aviary birds. Rather than delivering the daily food intake of your parrots in ways that provide little motivation for exploration and engagement with their environment, it is important to consider varying how food is presented and delivered as an essential component of an enrichment program for your birds. The photographs accompanying this article provide some visual representations of different ideas for the presentation of foods to increase time spent foraging and subsequently reduce boredom and inactivity.

Conclusion

The management of a pet parrot diet can play an important role in achieving opportunities for more effective delivery of treats as reinforcers, and also as a strategy in enhancing the overall environmental enrichment experience on offer. In our next *PPP* column we will look at how the combination of approximation schedules and creative diet management can be applied to manage a flighted companion parrot successfully in the home.

Send us an email via ppp@birdkeeper.com.au and your questions may be shared with our readers through future editions of 'Pet Parrot Pointers'.

Reference

Chance, P 2006, *First course in applied behaviour analysis*, Waveland Press, Illinois.





An outdoor enclosure facilitates variable placement of foods and diet management options that may be otherwise limited in an indoor environment

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Recommended reading **A Guide to Pet and Companion Birds**, **Good Bird—A Guide to Solving Behavioural Problems in Companion Parrots** and **Parrot Problem Solver—Finding Solutions to Aggressive Behaviour**, and the DVDs **Parrot Behaviour and Training Part 1—An Introduction to Training** and **Part 2—Training Your Parrot for the Veterinary Exam** and **Captive Foraging: The Next Best Thing to Being Free**. (See Free Mail Order Card.)

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