The Mouse Went Down the Hole
Psychological Appetite: Nature's Training Tool

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Abstract: This paper will explore the art of weight management as it pertains to creating psychological appetite, an extremely effective training tool. Psychological appetite is a concept Steve Martin, the President of Natural Encounters, Inc., developed and has been teaching for over 15 years. Many facilities use weight management as part of their strategy to train free flight birds. Often, there is a target or ideal weight we aim to fly our birds at. We set that weight based on many factors, the final one often being the bird's performance of a desired behavior. This paper will discuss how to set a target weight, as well as, several of the things that may affect a bird's weight, therefore affecting its target weight. I also plan to discuss the importance of having a target weight that changes often, depending not only on behavior, but on several environmental factors. Additionally, I will discuss how weight management and the creation of psychological appetite fit into the training toolbox. The ultimate goal of this paper is to show that the creation of psychological appetite can allow trainers to train and showcase their birds at weights equal to or above their ad-lib weights.

Keywords: psychological hunger, target weight, ad-lib weight, feed up weight, free feed, window of opportunity, variable reinforcers.

Bird trainers traditionally use a variety of methods to create the motivation for their birds to perform desired behaviors. The most dangerous, and the most effective, of these methods, is reducing the bird's body weight and creating hunger, or drive, which encourages the bird to work for its food. This strategy is an effective way to train birds when used properly. However, when used improperly, it can be harmful to the bird's health and welfare.

I plan to demonstrate how to set up a successful weight management program that will allow you to use psychological appetite as a training tool which will, therefore, allow you to successfully train and fly your birds at or above their ad-lib weights. Psychological appetite is a concept Steve Martin, the President of Natural Encounters, Inc., developed and has been teaching for over 15 years. I have seen this concept successfully applied to over 100 different bird species in the time that I've been with Natural Encounters, Inc..

Psychological appetite is the creation of a perceived feeling that there is a food shortage. The result is that the bird is more likely to be motivated to take advantage of the opportunity to obtain a food item. Ad-lib weight is a bird's natural body weight when the bird is on free feed or feed up. Free feed represents a situation in which a bird has all the food it wants in front of it all day. Free feed is generally used with parrots, softbills,

and other fruit or pellet eaters. Feed up is a situation in which a bird is given all the food it wants for a period of time and, once the bird is satiated, the leftovers are removed. Feed up is generally used with birds of prey and other meat eaters, and mirrors their wild eating habits.

When we ask a bird to perform a behavior we should initially ask ourselves two fundamental questions. First, what is the bird's motivation to perform the behavior? And, second, how does it relate to the species in the wild? Assuming we are using positive reinforcement to train our bird, the motivation is to gain pleasure. One of the most powerful ways to gain pleasure is through feeding. Feeding is one of the most effective ways to gain a bird's attention and reinforce a desired behavior. Of course, food is only reinforcing if the animal wants to eat what we have to offer. Lets look at the second question, how the behavior relates to the species in the wild. Even captive raised animals have instincts. Probably one of the strongest; is the instinctive knowledge that they need food to survive.

Looking at wild bird behavior, we see that a large part of the day is spent in search of food. Whether it's the songbird gleaning berries or insects from the trees or the Red-tailed Hawk patiently perched on a telephone pole waiting for a mouse to run by, both are in search of food. And, in the wild, it can be days between meals for some birds of prey; sometimes because they hit the jackpot and may not be motivated to expend energy to hunt for a few days, sometimes because no opportunity presented itself, and sometimes because the hunts were continuously unsuccessful. Looking at the Red-tailed Hawk perched on the pole; we also know every attempted catch is not successful. Because the hawk does not know when its next meal may be, it is motivated to take advantage of those opportunities that present themselves and that may be most successful. If the hawk lingers too long before attempting the catch, that mouse may very well go down a hole. The bottom line is, if you sense a food shortage or you don't know when your next meal will be, you are more likely to be motivated to store up your energy now and take advantage of every opportunity that presents itself to gain a food source. Conversely, if you always have a full plate of food, you may be less likely to clean your plate every time.

We see this phenomenon, this psychological appetite, in many, if not all, animals. It is even seen in humans in some circumstances. For instance, in preparation for a tornado or hurricane or anything that may keep us bound to our homes, we may stock up on canned goods to avoid that possible food shortage. Psychological appetite, therefore, can be a powerful training tool. It creates motivation and allows animals to work for a living like they would in the wild. Animals are "built to behave" and studies show, when given the choice, most will still engage in species typical foraging behavior even when food is freely presented to them. Training which utilizes psychological appetite and weight management is simply an interplay of conditioned responses to cues and the motivation to satisfy appetite. Psychological appetite is produced through creating a perceived food shortage based on how the food is presented. And, when combined with variable reinforcers and small windows of opportunity, psychological appetite provides increased motivation without having to reduce an animal's body weight. These training strategies combined, can also promote healthier and more enriched lives for captive animals.

Both variable reinforcers and small windows of opportunity complement psychological appetite. Using variable reinforcers refers to using a variety of different food items in a variety of quantities to reinforce a bird. The key to using variable reinforcers is that the bird does not know the type or quantity of reinforcer until after the behavior is performed; as opposed to baiting, where they see what the reinforcement is and can decide whether it's worth the performance of the behavior. With variable reinforcers, the bird is more likely to perform the behavior to discover what the reinforcement will be. Additionally, when using food to reinforce behavior, remember that all diets should be nutritionally balanced and species appropriate. Let nature be your guide when deciding what types and quantities of food to feed your animals.

Window of opportunity is the time in which the bird can perform the behavior in response to the cue to earn the reinforcement. If the bird takes too long to respond to the cue, the bird's window of opportunity can be closed by removing the cue and the opportunity to earn reinforcement. This is similar to the mouse going down the hole in the scenario where the Red-tailed Hawk lingers before attempting to catch the mouse. The hawk will be less likely to linger next time. The bird will be quicker to respond to the cue to gain the food reinforcement once it understands that a slow response will result in a loss of reinforcement. If the bird already feels it does not know when the next meal will be (psychological appetite), is intrigued to see what the meal will be (variable reinforcers), and knows the opportunity to gain the meal will disappear quickly (short window of opportunity), it will most likely perform the behavior quickly and consistently.

You may have noticed that I have not mentioned weight yet. All too often when using weight management to train birds, people get stuck on magic numbers or equations that they think will result in good behavior. We often get asked by trainers beginning a training program questions like, "What weight should I fly my Harris' Hawk at?" or "What weight does your Harris' Hawk fly at?" Of the 14 Harris' Hawks in our company, I could not tell you one of their flying weights right now. That is because each is different and each is constantly changing. There is no magic weight that a bird should be at to perform effectively. Weight is just one factor in assessing a bird's motivation to perform a behavior.

That leads us to the first important thing to understand about starting a weight management program and setting target or flying weights. That is, that target weights are dynamic rather than static. Target weights vary not only with the bird's performance of a desired behavior, but also with the environment. Weights will vary with breeding season, age, weather changes, and show environment changes. For example, birds will likely have higher target weights in winter months than in summer months. Target weights for birds flying in an indoor climate controlled theatre with a fairly static environment may be very different from those for birds flying in an outdoor theatre with occasional distractions. Target weights for a Harris' Hawk flying a complex behavior of targeting points at A-B-C and D may be very different from those for that same hawk flying a simple A-B behavior. And, while a bird's weight influences their health, the individual bird's behavior should influence their target weight. Not a magical number or equation.

The bird's behavior should drive the target weight when it comes to raising or lowering that target weight. However, when it comes to lowering a target weight to increase performance success, environmental distractions and training strategies should

be evaluated and modified before lowering the weight. Lowering the weight is the very last factor we consider in our training plan. Some examples of environmental factors to consider before lowering weight might include; the bird hitting it's wings on an obstacle, a new trainer, a new addition to the environment, a behavior somehow uncomfortable for the bird, overgrown vegetation in the bird's flight path, the same reinforcement every time, or trained slowness. Options that should be explored before lowering the weight are things like removing obstacles like branches in the flight path and changing the training strategy. Then, after everything else has been explored, it may be time to decrease the target weight and lower the bird's weight.

So, how do we create psychological appetite and choose a target weight? We start by getting daily weights on our bird. This is extremely important for a variety of reasons. Not only is it important in understanding our bird's motivation level as it relates to psychological appetite, but a drop in weight is often the first sign of a health problem. In the wild, animals that appear sick may be seen as easy prey. Therefore, to increase their survival and decrease the chance of being preyed upon, birds often mask their symptoms. By the time they appear physically ill, the illness may have progressed beyond the point of medical help. By weighing a bird daily, the illness may be caught early enough for effective treatment. Therefore, one of the first behaviors any bird should be trained to perform is to step on a scale to be weighed.

This can be trained using positive reinforcement and the motivation created by psychological appetite. Using positive reinforcement, you can train a bird to be weighed for the food in its diet, or for pieces of its favorite treat that have been withheld from its diet. So, step one, is to take the food away. That does not mean the bird does not eat that day, it just means there isn't food *in front of* the bird all day. I will use a parrot as an example to explain the process.

We will keep a daily training record for our parrot (see attached record sheet). Notice that there are several lines for the target weight because we know, as I said earlier, that the target weight will change frequently. With our parrot, Polly, we will start by weighing out how much food we already give Polly when Polly has all the food he wants in front of him all day; when he is on free feed. Let's say Polly normally eats 60g of pellets, 40g of fruits and vegetables, and 10g of sunflower seeds. Rather than feeding Polly at 8:00 a.m., we will wait until 10:00 a.m. and begin training Polly. Chances are Polly will not want to work for those same pellets he gets all the time. Maybe he prefers his sunflower seeds. Maybe he will work for the 10g of sunflower seeds. Chances are the training sessions will be short in the beginning since Polly will only work for those seeds until he's satiated, which may come rather quickly since Polly has been on free feed for a while.

Later in the afternoon, after our training sessions, we will feed Polly the remainder of his 60g of pellets and 40g of fruits and vegetables. We also feed Polly small amounts of his pellets and fruits and vegetables at the end of *each* training session. The next morning, we will take away the food he didn't eat and weigh it back. Let's say Polly ate 50g of pellets and 30g of fruits and vegetables. Yesterday we were able to weigh him using his seeds and he weighed 1000g. That 1000g represents Polly's ad-lib or natural weight when he has all the food he wants in front of him. We may also call this Polly's free feed weight. Note that ad-lib weight also changes with season, age, environment, etc.

Today, we will write Polly a diet of 50g of pellets, 30g of fruits and vegetables, and 10g of sunflower seeds. We will train Polly throughout the day for the seeds and offer the pellets and fruits and vegetables as well. Perhaps he won't work for pellets again but he works for the seeds. Let's say Polly weighs 1000g again today. Later this afternoon, we will feed Polly the rest of his pellets and fruits and vegetables, see what he leaves over tomorrow, and weigh it back.

Let's say he ate all but 5g of pellets this time and weighed 1000g again. So, today, we'll do the same and write a diet of 45g of pellets, 30g of fruits and vegetables, and 10g of sunflower seeds. We will work him again and, if he's motivated, start a new behavior other than simply being weighed. We will offer him all of the food items in his diet, we will see what he eats first, and then we will use that as a training tool. Let's say he prefers sunflower seeds but also likes some of his fruits and vegetables today. We will use the seeds and fruits and vegetables to reinforce him during the training sessions. And, we will feed him the remainder of his diet minus any leftover seeds at the end of our last training session. For most parrots, seeds are not as nutritious as the pellets and it is healthier for the seeds to remain a smaller percentage of the diet.

Let's say Polly is now eating all his food in the afternoon and working well. At this point, we can set Polly's target weight at 1000g and vary his diet to achieve that weight. Eventually, once he realizes there's a food shortage because there is not food in front of him all day, he may even *want* his pellets and work for them as well. Eventually, Polly may work for his entire diet.

If Polly appears distracted, or has a poor attention span, we may decide to increase his motivation by reducing his weight. However, before doing so, we will make sure to consider all other elements of Polly's training such as environmental distractions, reinforcement history, and the bird's ability to perform the behavior we are asking for. So, once we have explored and manipulated the above options without success, we finally decide to make his target weight 990g. This is a very safe reduction as it is only 1% of his ad-lib weight. Although we are *constantly* evaluating our training progress and strategy, our policy is to completely reevaluate our training strategy any time a bird needs to have his weight dropped to 10% of his ad-lib weight to create motivation to perform desired behaviors. At this time, we also evaluate if the bird is the right bird for our show and training program. And, we always date any change in target weight so we can keep track of Polly's weights and their relation to the seasons, etc.

Let's say Polly is still slow to respond after being at 990g for several days without any new environmental distractions. We then decide to drop his target weight to 980g. At 980g, there may be some real motivation kicking in. So, Polly works great at 980g, has learned several new behaviors, and is ready for shows. However, once we introduce the audience, the last aspect of the training environment and behavior, we find Polly is distracted. After several repetitions of the behavior with a small audience, he's still not as motivated as we'd like so we decide to drop his target weight to 970g. At 970g, Polly rocks!

A few weeks go by, we're using all our training tools effectively, and Polly's behavior is rock solid. It's time to begin slowly raising his weight and his target weight on our training record sheet. When we raise a bird's target weight, we do so in small and slow increases in weight and food so that the bird doesn't notice the change. Conversely, when we lower a bird's weight to focus it or increase it's motivation, we attempt to do so

in quick, larger decreases in weight and food so the bird quickly notices the food shortage. If we slowly decrease the weight and food, the bird would be less likely to notice the change, thus having less effect on creating motivation. With a slow weight loss, a bird is more likely to lose more weight before we see increased performance or attention span. Notice, we have decreased Polly's weight by only 30g, or about 3% of his ad-lib weight.

It is also important to consider the *type* of bird when lowering its weight. A parrot or a hawk will notice a quick 10g decrease in weight a lot more than a larger bird, say an eagle or a ground hornbill. Bird's weights, just like our weights vary daily. If we were to weigh ourselves daily, we would notice slight changes, a pound or two here and there. There are 454g in a pound. We will notice that our bird's weight may vary by a few grams daily. Just like we would not notice a drop or increase in our weights of one or two pounds, a larger bird, say an eagle weighing an average of 3000g would not notice a quick 10g decrease in weight. It would, however, notice a quick 60g decrease, still only a 2% decrease in its weight. Therefore, if you choose to lower the weight of a larger bird, you should do so by a larger increment. Otherwise, again, you may end up lowering the bird's weight too slowly, therefore, having to lower it more, possibly to a weight that may compromise its health, before you see an increase in motivation.

Now, let's say we decide to increase Polly's target weight to 980g. He continues to rock for about 2 weeks. So, we try raising his target weight to 985g. We continue raising his weight slowly and we may find that Polly now weighs 1035g; 35g *above* his current ad-lib weight, and he is still doing great in shows. So, again, we increase his target weight to 1040g. Let's say that at 1040g, with no major environmental, seasonal, or training changes, Polly's behavior breaks down. So we finally decide, after exhausting all other avenues, to lower his target weight to 1025g. Notice that this new lower weight is still 25g *above* his ad-lib weight. He quickly regains motivation and quickly returns to a state of rocking in shows! So, again, after a week or two, we raise his target weight to 1030g and then to 1035g. We may decide, knowing that he broke down at 1040g, that 1035g will be Polly's target weight for an extended period of time.

As environment changes this target weight may change as well. And, we will explore increasing his target weight again in the future if his good behavior continues. Conversely, if the season changes, let's say spring approaches; we may find that the target weight may, again, need to be lowered since Polly doesn't seem quite as food motivated. Many birds lose weight in the spring that they have put on in the winter. This is a natural way to protect themselves from harsh weather and limited food resources. Polly's lack of food motivation may be seen in Polly playing with his sunflower seed shells or playing with or dropping some of his pellets; important things to be aware of. If attention is not paid to these small signs of a lack of food motivation, we may take the chance of Polly possibly flying off and sitting in a tree for several hours or overnight because he just doesn't have enough food motivation to come down. The motivation to chew on the branches and enjoy the sunshine may outweigh his food motivation since he is working above his ad-lib weight. This can be avoided by paying careful attention to all aspects of Polly's behavior.

And, just as a "fat" bird may show a lack of motivation, a bird that is too thin may do the same. Therefore, it is important to explore the option of greatly raising a bird's target weight before deciding to decrease its weight to create motivation. To help decide

what may be the cause of a bird's lack of motivation, it would be beneficial to train the bird to accept physical manipulation. If you can train your birds to willingly accept tactile manipulation without the stress of being caught up, you can feel their keel bone and the muscle or fat around it. While all birds and all individuals feel a bit different, generally a very sharp keel may be a sign of a bird that may be too thin, while a well-rounded keel may be a sign of a healthier bird.

Training and weight managing other types of birds is similar. With a hawk, for example, the food may be chick, mouse, rat, quail, and processed bird of prey diet. Now, because hawks don't always eat daily in the wild, we may choose to fast our hawk for a day early in the training process or give him considerably less food than he's used to for a day to help him begin to feel the food shortage. It should be noted that fasting a bird may create a slower weight reduction than giving a bird a small amount of food. When a bird is fasted, its metabolism slows down to be more efficient and, therefore, it may not lose much weight. A quicker reduction in weight may result from giving a bird a little food to keep the digestive process working and to allow it to lose weight faster. Birds that have been on free feed or feed up for a long time may have fat stores to gain energy from. These birds may not initially be motivated to work for food until they have burned off a little of their fat reserves.

We never fast our parrots, although, we may choose to decrease the amount of pellets offered at first. However, we still give them plenty of fruits and vegetables. Fruits and vegetables are mainly made up of water and will give a parrot the feeling of being satiated while still decreasing their weight; similar to the way it works with humans.

I feel that birds that work for their food may generally be healthier than those that do not. This may be especially true if they are flying because they are getting exercise, burning fat, and developing muscle. Keep in mind, too, that muscle weighs more than fat. We can expect to see an increase in our bird's weight on a consistent diet if it is exercising and increasing muscle. To maintain that muscle, the bird needs an increase in its food intake so that it can continue to use the food for energy rather than having to burn the muscle for energy.

Note, also, that sedentary birds given an increase in food will gain weight as fat, which does not contribute to the strength of the bird. Conversely, exercised birds given more food will gain weight as muscle, rather than fat, and will therefore gain strength and endurance. And the bird's brain, monitoring its body energy stores, will continue to motivate behavior directed at food acquisition because the bird is not gaining weight as fat. Additionally, this muscle increase may still be used as an energy store if increased energy demands come to exist. Increased energy demands may include things like sudden cold weather or illness.

Also, a bird may maintain the same weight with varying amounts of food. Its body may become more efficient at how it processes and uses smaller and smaller amounts of food. If a bird gets an enormous amount of food, it may utilize only what's needed and either convert the rest to fat or excrete it as waste. The less food it gets, the more efficient it's utilization of the food, and the less waste is produced. Therefore, if we find our bird is getting less and less food to work with and still maintaining the same weight and same great behavior, we may be able to increase the amount of food, maybe even double it, without seeing a large increase in weight. We should still get good

behavior as long as we continue to vary the presentation of the food and use all our training tools effectively.

When the show season is over, we should put our birds back on feed up or free feed. The birds, still having psychological appetite, will probably quickly eat everything they are fed. It is important, therefore, to give them a bigger diet than their working diet but not an enormous diet when first putting them on feed up or free feed. A bird that gorges an enormous diet may get sick if its body cannot adequately process all the food. This can easily happen if birds are working at weights that are too low. Birds working at low weights may not have enough stored fat or muscle energy to burn to process the enormous quantity of food. This situation could be fatal. Therefore, it is safer to *slowly* increase the feed up or free feed diets within the next few days of putting birds on feed up or free feed to insure illness does not occur.

When you do put your birds on feed up or free feed, continue to monitor their weights (see attached graph). At first, since psychological appetite still exists, you can expect to see a sharp increase in the bird's weight. Eventually, usually after several weeks, you will see the weight slowly decrease and level out. The weight may begin to decrease again and finally, after a few months, level out at the bird's ad-lib weight. Remember, depending on season, age, and other factors in the bird's environment, the ad-lib weight may be different from the one the bird started with.

In summary, we will increase the bird's weight until it quits performing the behavior then focus it a bit by bringing its weight down just a bit. Our goal is to end up working our birds at or above their ad-lib weights. A general rule to remember is to simply work all your birds at the highest weight possible to maintain good behavior. But remember, there is a greater liability of fly off at a higher weight. As the bird's weight continues to increase, the bird is working on habit and *psychological* appetite. If something causes the bird to fly off and sit in a tree, it may stay out longer if it feels there is no real drive to satiate its appetite.

As you can see, while weight management is a factor in creating psychological appetite, once created, that psychological appetite can allow you to successfully work your birds at or above their ad-lib weights. Psychological appetite, paired with variable reinforcers and short windows of opportunity, can be an extremely effective training tool.

Finally, when creating a weight management program, remember that your target weight will constantly change and should always be driven by the bird's behavior rather than past performance, past target weights, weights of other individuals of the same species, or, of course, magical numbers or equations.

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Record sheets begin on the next page.

Record Sheets:

Bird Polly (Parrot) **Target** ~~1000~~ 990 2/4/03 C.M. 2/7 CM

Date	Weight (grams)	Diet P	Diet FV	Diet SS	Comments
2/1/03	1000	~~60~~ 50	~~40~~ 30	10	Began training at 10am. Introduced to scale. 7-8 reps on/off scale. Would only eat seeds. Average attention span- lasted approx. 10 min.
2/2/03	1000	~~50~~ 45	30	10	a.m. session- ~10 reps on/off scale. Avg. attn. Span p.m.- reps on/off scale. Good attn. span. ~5 Reps on/off T-perch in parrot room. Nervous. Good attn. span. Still only eating seeds.
2/3/03	1000	45	30	~~10~~ 6	a.m.- ~8 reps on/off T-perch in prt. room. More comfort at end of session. Ate some corn. p.m.- began flight training. ~8 reps on/off T-perch to me. Last rep, 'flew' ~1ft. to hand. Great attn. span at first but faded. Took corn, pea, and apple. Dropped carrot and pellet.
2/4/03	1000	45	30	5	a.m.- ~5 reps flying from T-perch. Last rep 2ft. wouldn't fly past that and lost attn. span quick. Took some pellets too. p.m. ~5 reps flying. Last rep 5 ft. for jackpot. Good attn. span but began to fade after 3rd rep.
2/5/03	1000	45	30	5	Began training to fly person to person (CM,EI). Started by just stepping from CM to EI. Wouldn't go. Tried stepping from T-perch to EI. Nervous but went. ~4 reps in am. ~5 reps in pm. More comfortable but lost attn span quick.
2/6/03	1000	45	30	5	Am- 1 rep from perch to EI. Good. Started EI to CM. Good. Quicker to go to CM than EI Pm- continued, ~5 reps. Better flying to both. At end, flying ~2ft. avg. attn. span faded quick

P = Pellet ; **FV** = Fruits and Vegetables ; **SS** = Sunflower Seeds
Each is weighed out in grams.
The original set of numbers in each diet box represents the diet written, while the remaining set of numbers in each box represents the diet eaten after leftovers have been weighed back.

Bird *Polly (Parrot)*

Target ~~990~~ **2/7 CM**
980 2/11 CM

Date	Weight (grams)	Diet P	FV	SS	Comments
2/7/03	1000	~~45~~ 40	30	5	Am. Flew ~5ft. CM to EI, ~5 reps short attn. span. Nervous flying past cabinet (been there the whole time). Pm. Same, short attn span. Wouldn't fly more than 5 ft. decided to lower target to 990g
2/8/03	990	40	30	5	Am. Same as yesterday, flew ~ 7ft. good attn span. Pm. short attn. span, playing with seeds, dropping pellets, slow to fly, did 4 reps, last rep 10 ft.
2/9/03	990	40	30	5	Am. Flying full distance but easily distracted and playing w/ food after 3rd rep. Comfortable in environ. Pm. Did 2 reps for jackpot
2/10/03	990	40	30	5	Am. 1 rep in parrot room. Good, took to new environ (netted area outside). Nervous, relaxed criteria to short flights ~1ft. did ~5 reps. Last rep~4ft. avg. attn. span Pm. Still nervous, wouldn't' fly 5ft. relaxed to 3ft. did well but short attn. span
2/11/03	990	~~40~~ 35	30	5	Am. Good at 3ft. seemed more comfortable today, ~8 reps last one ~10 ft. good attn. span but slow to fly and eating slow. Pm. Flying comfortably but slow to eat and dropping pellets. Did ~5 reps. Decided to lower target to 980g
2/12/03	980	35	30	5	AM. Great attn. span. Quick to respond, eating all food and not playing with it. 5 reps, last rep full length of netted area. Pm. Great attn. span. 8 reps length of area

P = Pellet ; **FV** = Fruits and Vegetables ; **SS** = Sunflower Seeds
Each is weighed out in grams.
The original set of numbers in each diet box represents the diet written, while the remaining set of numbers in each box represents the diet eaten after leftovers have been weighed back.

Bird *Polly (Parrot)* **Target** 980 **2/11 CM**

Date	Weight (grams)	Diet P	FV	SS	Comments
2/13/03	980	35	30	5	Am. Great attn. Span, flew 3 reps length of area for jackpot Pm. 5 reps great. Will go on stage tomorrow
2/14/03	980	35	30	5	Am. 1 great rep in netted area, brought on stage. Relaxed to 1ft. on stage to start. Great attn. span, last rep 6ft. on stage Pm. Began training behav. Fly from release in woods house right, to tree stage right, to trainer center stage. Started by flying from first row seats stage right to trainer on stage, stage right in front of tree. Did 6 reps. Last rep flying from row 4 to tree stage right, trainer reinf. in tree after bridging.
2/15/03	980	35	30	5	Am. Continued, 6 reps, last rep flying from house center, row 10 to tree on stage. Great attn. span Pm. 7 reps, last rep house center row 10 to tree on stage. Trainer standing center stage, bridging for landing in tree, then going over to reinforce.
2/16/03	980	35	30	5	Am. Same as yesterday but after bridge in tree, trainer calling Polly to her center stage, bridge and reinforce. Hesitant to fly to center stage so trainer relaxed to 4 ft. from tree., 5 reps Pm. Same, 6 reps, last rep trainer at center stage, great attn. span
2/17/03	980	35	30	5	Am. Trainer in house began moving back towards house right woods. 5 reps, last rep house trainer row 10 almost house right. Pm. Great, last rep house trainer house right about 4 ft. from woods entry point.
2/18/03	980	35	30	5	Am. Great. 5 reps, last rep house trainer 4 ft. into woods Pm. Great attn. span. 3 reps, last rep from 10 ft. into woods, about 5 ft. from release box, just out of line of sight with stage

Bird *Polly (Parrot)*

Target ~~980~~ **2/11 CM**
970 2/23 CM

Date	Weight (grams)	Diet P	FV	SS	Comments
2/19/03	980	35	30	5	Am. 4 reps, last 2 from just in front of release box Pm. Put in release box and shut door. Stood off to side as released. Polly climbed out, looked at trainer, gave sending signal, then flew. 3 reps, last rep, trainer was hidden out of sight
2/20/03	980	35	30	5	Am. 2 reps, trainer left in release box and went back to remote release. Did great. A little hesitation on perch outside release before flying Pm. 2 reps great, less hesitation, had trainers watching in seats yesterday and today, didn't seem to mind them
2/21/03	980	35	30	5	Am. 1 rep great, will try pre-show this afternoon Pm. Did 2:00 pre show, ~150 people, swerved a bit on flight to tree. Sat in tree looking at people. Slow to fly to trainer cent. stage, trainer had to relax to 3 ft. in front of tree after closing window several times at cent. stage
2/22/03	980	35	30	5	2 pre-shows today for ~200 people each. 10am- did well, did fly to trainer center stage but sat in tree looking at audience a bit. Trainer had to close window 3x. 3pm- sat in tree a bit looking at audience, finally flew to trainer after closing window 3x and relaxing criteria a few ft.
2/23/03	980	~~35~~ 30	30	5	1 pre-show, 2pm. Still slow to fly to trainer, distracted by audience, had to close window several times, will lower target to 970g
2/24/03	970	30	30	5	1 pre-show, 12p, better. Sat in tree a bit looking at audience but flew to trainer center stage first try, trainer waited a bit before calling Polly to let him look at audience a bit

Bird *Polly (Parrot)* **Target** 970 **2/23 CM**

Date	Weight (grams)	Diet P	FV	SS	Comments
2/25/03	970	30	30	5	2 pre-shows. 10a- good, flew to trainer first try 3p- great flew to trainer as soon as called
2/26/03	970	30	30	5	10a pre-show- perfect, watching trainer, waiting to be called will try in show 3p show- great, bigger crowd, watched audience but flew to trainer as soon as called
2/27/03	970	30	30	5	1 show today 3p- great, watched audience but flew to trainer as soon as called
2/28/03	970	30	30	5	2 shows today 10a- great, watching trainer waiting to be called 3p- great, great attn. span
3/1/03	970	30	30	5	Am- trained reps on stage flying to new trainer. (CC) Did great, no hesitation 3p show, flew to CC on stage, great.
3/2/03	970	30	30	5	Am- trained reps on stage flying to DL. 3pm show- flew to DL on stage. great
3/3/03	970	30	30	5	Am- reps on stage w/ DSE, good 3pm show- great for DSE
3/4/03	970	30	30	5	Am – reps w/ EI on stage, great 3pm show- great for EI
3/5/03	970	30	30	5	2 shows, 10am- great for CC 3pm- great for DL
3/6/03	970	30	30	5	10am- great for EI 3pm- great for DSE
3/7/03	970	30	30	5	1 rep w/ SGF before 10am show, great 10am-great for SGF 3pm- great for CM

Bird *Polly (Parrot)*

Target ~~970~~ **2/23 CM**
980 3/20 CM

Date	Weight (grams)	Diet P	FV	SS	Comments
3/8/03	970	30	30	5	Great for 2
3/9/03	970	30	30	5	Great for 2
3/10/03	970	30	30	5	Great for 3 shows
3/11/03	970	30	30	5	Great for 3
3/12/03	970	30	30	5	Great for 2
3/13/03	970	30	30	5	Great for 2
3/14/03	970	30	30	5	Great for 3
3/15/03	970	30	30	5	Great for 2
3/16/03	970	30	30	5	Great for 2
3/17/03	970	30	30	5	Great for 3
3/18/03	970	30	30	5	Great for 2
3/19/03	970	30	30	5	Great for 2,
3/20/03	970	~~30~~ 35	30	5	Great for 2, raise target to 980g CM
3/21/03	980	30	30	5	Great for 3
3/22/03	980	30	30	5	Great for 3
3/23/03	980	30	30	5	Great for 2
3/24/03	980	30	30	5	Great for 2

Bird *Polly (Parrot)*

Target ~~980~~ **3/20 CM**
~~985~~ 3/25 CM
~~990~~ 3/30 CM
995 4/5 CM

Date	Weight (grams)	Diet P	FV	SS	Comments
3/25/03	980	~~30~~ 33	30	5	Great for 2, raise target to 985g CM
3/26/03	985	33	30	5	Great for 2
3/27/03	985	33	30	5	Great for 3 shows
3/28/03	985	33	30	5	Great for 3
3/29/03	985	33	30	5	Great for 2
3/30/03	985	~~33~~ 35	30	5	Great for 2, raise target to 990g CM
3/31/03	990	35	30	5	Great for 3
4/1/03	990	35	30	5	Great for 2
4/2/03	990	35	30	5	Great for 2
4/3/03	990	35	30	5	Great for 3
4/4/03	990	35	30	5	Great for 2
4/5/03	990	~~35~~ 37	30	5	Great for 2, raise target to 995g CM
4/6/03	995	37	30	5	Great for 2,
4/7/03	995	37	30	5	Great for 3
4/8/03	995	37	30	5	Great for 3
4/9/03	995	37	30	5	Great for 2

Bird *Polly (Parrot)*

Target ~~995~~ **4/5 CM**
~~1000~~ 4/11 CM
~~1010~~ 4/15 CM
~~1015~~ 4/19 CM
1025 4/23 CM

Date	Weight (grams)	Diet P	FV	SS	Comments
4/10/03	995	37	30	5	Great for 2
4/11/03	995	~~37~~ 40	30	5	Great for 2, raise target to 1000g CM
4/12/03	1000	40	30	5	Great for 2,
4/13/03	1000	40	30	5	Great for 3
4/14/03	1000	40	30	5	Great for 3
4/15/03	1000	~~40~~ 50	30	5	Great for 2, raise target to 1010g CM
4/16/03	1010	50	30	5	Great for 2
4/17/03	1010	50	30	5	Great for 2,
4/18/03	1010	50	30	5	Great for 2,
4/19/03	1010	~~50~~ 55	30	5	Great for 3, raise target to 1015g CM
4/20/03	1015	55	30	5	Great for 3
4/21/03	1015	55	30	5	Great for 2
4/22/03	1015	55	30	5	Great for 2
4/23/03	1015	~~55~~ 65	30	5	Great for 2, raise target to 1025g CM
4/24/03	1025	65	30	5	Great for 2,

Bird *Polly (Parrot)*

Target ~~1025~~ **4/23 CM**
~~1035~~ 4/28 CM
~~1040~~ 5/3 CM
1025 5/8 CM

Date	Weight (grams)	Diet P	FV	SS	Comments
4/25/03	1025	65	30	5	Great for 2
4/26/03	1025	65	30	5	Great for 2,
4/27/03	1025	65	30	5	Great for 2,
4/28/03	1025	~~65~~ 75	30	5	Great for 3, raise target to 1035g CM
4/29/03	1035	75	30	5	Great for 3
4/30/03	1035	75	30	5	Great for 2,
5/1/03	1035	75	30	5	Great for 2
5/2/03	1035	75	30	5	Great for 2,
5/3/03	1035	~~75~~ 80	30	5	Great for 2, raise target to 1040g CM
5/4/03	1040	80	30	5	Great for 2, slow to fly to CC in 3rd show, had to close window once
5/5/03	1040	80	30	5	Great for 2, slow to fly to CM in 3rd show, playing w/ bark, had to close window 2x
5/6/03	1040	80	30	5	Slow to fly to DL at 10am, playing w/ bark in tree Slow to fly to DSE at 3pm, playing w/ tree
5/7/03	1040	80	30	5	Slow for EI @ 10am, playing w/ bark, closed window 2x, Slow for CC @ 3pm, closed window 2x, playing w/ bark
5/8/03	1040	~~80~~ 65	30	5	Slow for CM @ 10, closed window 2x, playing w/ bark, Slow for DL @ 3pm, closed window 3x, playing w/ bark, lower target to 1025g CM

Bird *Polly (Parrot)*

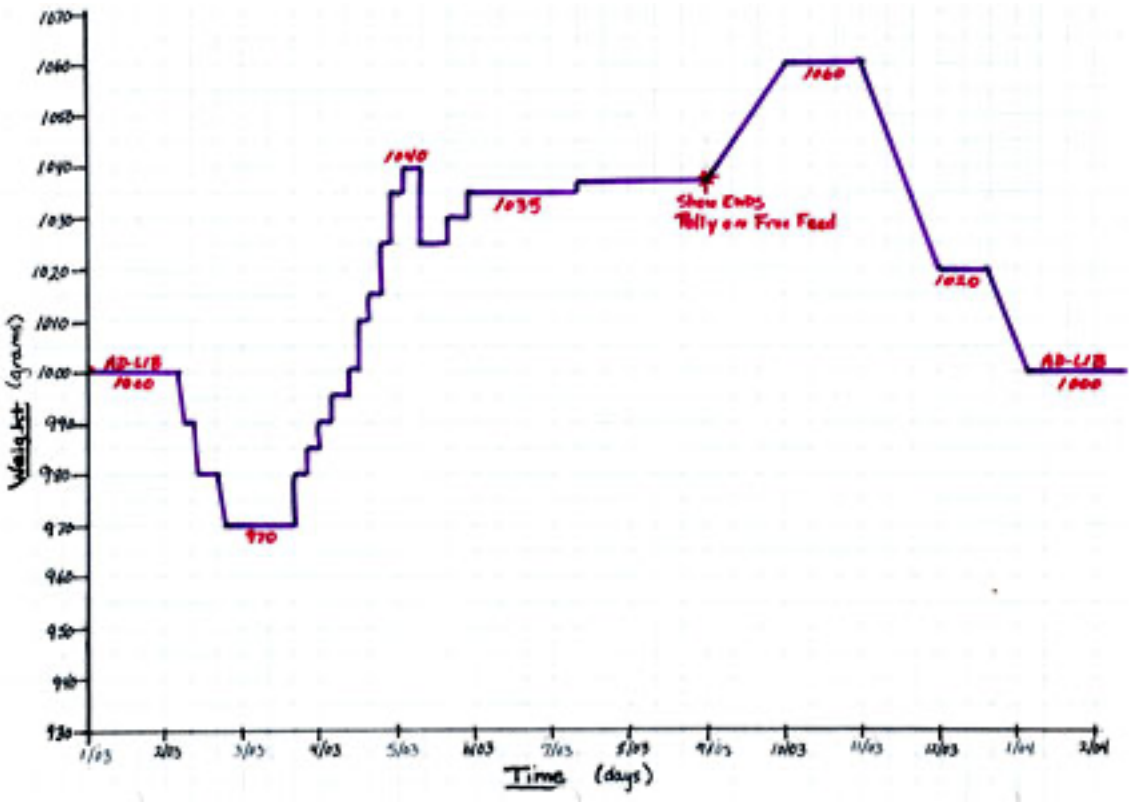
Target ~~1025~~ **5/8 CM**
1030 5/21 CM

Date	Weight (grams)	Diet P	FV	SS	Comments
5/9/03	1025	65	30	5	Good for CC @ 10am Super fast for DSE @ 3pm, watching DSE, not playing w/ tree, great attn. span
5/10/03	1025	65	30	5	Great for CM @10am Great for EI @ 3pm
5/11/03	1025	65	30	5	Great for EI @ 10am Great for CC @ 3pm
5/12/03	1025	65	30	5	Great for 3
5/13/03	1025	65	30	5	Great for 2
5/14/03	1025	65	30	5	Great for 2
5/15/03	1025	65	30	5	Great for 3
5/16/03	1025	65	30	5	Great for 2
5/17/03	1025	65	30	5	Great for 2
5/18/03	1025	65	30	5	Great for 2
5/19/03	1025	65	30	5	Great for 3
5/20/03	1025	65	30	5	Great for 3
5/21/03	1025	~~65~~ 70	30	5	Great for 2, raise target to 1030g CM
5/22/03	1030	70	30	5	Great for 2
5/23/03	1030	70	30	5	Great for 2

Bird *Polly (Parrot)*

Target ~~1030~~ **5/21 CM**
1035 5/28 CM

Date	Weight (grams)	Diet P	FV	SS	Comments
5/24/03	1030	70	30	5	Great for 2
5/25/03	1030	70	30	5	Great for 3
5/26/03	1030	70	30	5	Great for 2
5/27/03	1030	70	30	5	Great for 2
5/28/03	1030	~~70~~ 75	30	5	Great for 3, raise target to 1035g CM
5/29/03	1035	75	30	5	Great for 2
5/30/03	1035	75	30	5	Great for 2
5/31/03	1035	75	30	5	Great for 2
6/1/03	1035	75	30	5	Great for 3
6/2/03	1035	75	30	5	Great for 3
6/3/03	1035	75	30	5	Great for 3
6/4/03	1035	75	30	5	Great for 2
6/5/03	1035	75	30	5	Great for 2
6/6/03	1035	75	30	5	Great for 3
6/7/03	1035	75	30	5	Great for 2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