

The S Files

SUCCESS WITH MARIA: SUNSHINE: BITING

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Photo Credit: Karen Anderson

The S Files are real case studies of behavior challenges faced by companion parrots that were successfully resolved using systematic, non-forceful behavior change strategies. In all cases, the interventionists were the parrots' actual caregivers, who have a strong commitment to changing behavior with the most positive, least intrusive effective strategies, but little or no prior experience applying the teaching technology of applied behavior analysis.

The S Files are not behavior-change recipes. Train-by-numbers approaches often fail because every bird is a study of one and every relationship and setting is unique. However, the steps used in these case studies can provide the scaffolding to better understand, predict, and change behavior with your own parrots or

those with whom you work. Appreciation and admiration is extended to the many caregivers described in the S Files for their willingness to share their dedication and behavior programs here.

Meet:

Maria and Joe Chapman (Caregivers),
Sunshine (approximately 5 month-old, rainbow lorikeet, flighted)

Relevant Background:

Joe has limited mobility and Maria is blind.

Maria's elderly father stayed with the family for a period of time. He suffers from loss of memory and judgement associated with his age. Prior to his arrival

Sunshine occasionally nipped Maria but had never caused bleeding. During her dad's stay, Maria observed him poking Sunshine and tapping her beak through the cage bars. Although Maria explained to her dad that Sunshine found these interactions unpleasant he continued to "play" with her in this way. Maria suspects this experience partly accounts for Sunshine's increased biting.

I. Target Behavior: What is the one problem behavior you want to change? Describe it in unambiguous, observable terms.

Sunshine bites hands hard enough to cause bleeding.

II. Antecedents: What events or conditions immediately precede the behavior that may set it off? Specifically, consider the following possibilities:

General: Sunshine's cage is located in a high traffic room that has a lot of activity both day and night.

A. When is the problem behavior most likely to occur?

1. When Sunshine is perched on Joe or Maria and
 - a. Sunshine is not actively engaged in doing something such as manipulating a string, buttons, the remote control, fingers, Maria's hair or Joe's ear.
 - b. Joe or Maria try to interrupt what Sunshine is doing.
 - c. Joe or Maria moves his/her hands rapidly to deflect an impending nip or bite.
 - d. Maria adjusts her hair with her hand.
 - e. Maria asks Sunshine to step up from Maria's shoulder or head.



Poking and tapping the bird's beak through the bars may have increased biting behaviours.



Sometimes attempting to remove the bird from the shoulder resulted in a bite.

2. When Sunshine is asked to step up to return to her cage.
3. When Maria replenishes the bowls in Sunshine's cage.

B. Where does the problem behavior occur?

Other than the times when the cage bowls are being replenished, the bites occur when Sunshine is perched on Joe or Maria.

C. Who is present when the problem behavior occurs (people and pets)?

Joe and/or Maria are present. When the occasional nipping behavior escalated to biting, Maria's father was also present.

D. Are there any other antecedents that precede the problem behavior such as a demand or request, person entering or leaving the area?

When Maria requests that Sunshine step up from her head or shoulder, Sunshine is likely to bite. When either Joe or Maria try to stop Sunshine from what she is doing (e.g., removing the remote control) Sunshine is likely to bite.

E. When is the parrot most successful, that is, when doesn't the problem behaviour occur?

When Sunshine is actively engaged with toys or other activities she rarely bites. Sunshine never bites if asked to step up from inside her cage.

F. How might the behavior relate to behavior in the wild?

Biting may enable a bird to remove a predator or a competitor for scarce resources.

Biting may be part of young parrot's normal development as they explore their environment with their beaks.

III. Consequences: What is the purpose or "payoff" for engaging in the behaviour?

A. Positive reinforcers gained:

Social: Sunshine gets Maria's and Joe's responses to being bitten (attention); and sometimes she gets to stay with them.

Item or Activity: Sunshine gets continued access to the items she was playing with. In her cage she gets replenished food bowls.

Sensory Feedback: Automatic sensory stimulation resulting from biting. In her cage she gets to the food.

B. Negative reinforcers removed, escaped or avoided:

Social: Sunshine avoids being removed from her person and returned to her cage.

Item or Activity: Sunshine escapes hands interruption of her activity. In her cage, biting removes hands.

IV. Summary: Functional Assessment of the initial problem behaviours

A: Background: Sunshine is out of her cage. It is time to be removed from an activity and/or return to her cage by Maria or Joe.

Antecedent (A): Hand approaches

Behavior (B): Sunshine bites

Consequence (C): Hand is removed, attention and sensory stimulation is delivered, activity resumes and cage is avoided.

Prediction of future behavior if nothing changes: Sunshine will continue biting.

B: Background: Sunshine is in her cage. It's time for Maria to replenish the food bowls.

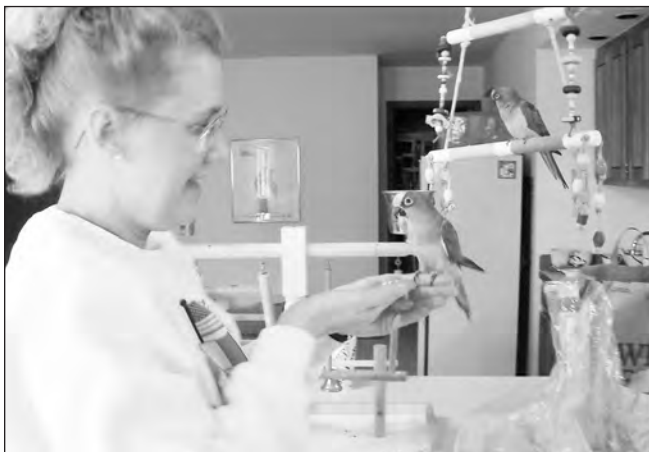
Antecedent (A): Hand approaches food door

Behavior (B): Sunshine bites

Consequence (C): Hand is removed, attention and sensory stimulation is delivered, replenished bowl is installed.

Prediction of future behavior if nothing changes: Sunshine will continue biting.

V. Replacement Behavior: What alternate behavior(s) would meet the same function for the parrot? What behavior(s) do you ultimately want the parrot to do?



Stepping up when a hand is offered is one ultimate desirable replacement behavior.



Calmly perching elsewhere when bowls are replenished is another ultimate desirable replacement behavior.

A particular vocalization Sunshine makes can replace biting and serve the same function of saying “No thanks!” to remove hands.

Stepping up when a hand is offered is one ultimate desirable behavior (saying “No thanks!” only rarely).

Calmly perching on the skewer hanging in her cage when bowls are replenished is another ultimate desirable behavior.

VI. Preliminary Strategies: How can you adjust the environment, including what you do, so that the behaviour doesn't occur in the first place? What behavior can you teach or re-teach so the parrot can successfully demonstrate the replacement behavior?

VII. Principles, Procedures and Outcomes

There is a lot to learn about functional misbehavior and behavior support from this case study. Joe and Maria's behavioral goals for Sunshine could not have been met with diagnostic labels such as dominance,

Antecedent Changes to Pre-empt the Behavior	Consequence Changes to Reinforce Alternate Behaviors	New Skills and Teaching Strategies
<ul style="list-style-type: none"> • Change the location of the sleep cage to provide quiet, restful sleep. • Ensure that Sunshine gets adequate exercise daily; provide a new play stand and offer a larger variety of toys and foraging items. • Reduce rapid hand movements in Sunshine’s presence. • Present step up hand with fingers wrapped around thumb until confidence is restored in bird and caregivers. • Cover ears before Sunshine perches on shoulder (see discussion below). • Pin hair up before Sunshine perches on shoulder or head. • Carefully observe Sunshine’s body language and vocalizations that predict a bite and don’t offer hands at those times. 	<ul style="list-style-type: none"> • Ensure that stepping up is always followed by stronger reinforcers than not stepping up, such as praise, food treats, favourite items. • Vary the outcome of stepping up. Don’t always follow Sunshine’s stepping up with returning her to her cage. • Offer reinforcers not available any other time to increase Sunshine’s motivation to step up. • Reinforce every time Sunshine steps into cage. • Reinforce sunshine for perching on cage skewer for longer durations while bowls are replenished. 	<ul style="list-style-type: none"> • Teach Sunshine that she can make choices by not forcing her to step up. Increase her choice to step up with strong reinforcers, including occasionally allowing her to immediately step back down again. • Begin target training with Sunshine to teach her more acceptable ways of interacting with Joe and Maria and increase the overall level of available positive reinforcement. • Practice stepping up under many different conditions and contexts frequently throughout the day. • Teach Sunshine to station to a specific perch in the cage so Maria can change to food dishes.

jealousy, or territoriality. Through the process of functional assessment, Maria and Joe learned what antecedent conditions predicted Sunshine’s biting behavior and what consequences reinforced it. They succeeded in reducing the behavior by 1) changing the conditions in which the biting occurred, and 2) offering certain, swift, strong positive outcomes for desired behaviors.

Joe and Maria implemented a multifaceted intervention to cover all the bases. They improved Sunshine’s sleeping arrangements by relocating her night cage in a quieter room to reduce nipping that may have been associated with fatigue. They also increased Sunshine’s motivation to play independently (off their bodies) by providing a new play gym and adding high interest toys and foraging opportunities, which they will vary frequently.



Wrapping the step up hand into a fist can increase confidence if a bite is anticipated. Photo Credit: Karen Anderson

Time spent in high-energy play on the gym before holding Sunshine, temporarily reduces the subsequent reinforcing value of boisterous play with Joe and Maria. This strategy is known as an establishing (or motivation) operation. It is an event that temporarily alters the potency of a reinforcer. As a result of “draining her gas tank” on the play gym with approved items, Sunshine played with unapproved items less (buttons, remote control, etc.) while perched on her caregivers. This in turn reduced Joe and Maria’s need to interrupt Sunshine’s undesirable activities which had set the occasion for biting in the past.

Critical to the program’s success was empowering Sunshine to make more choices throughout the day. Joe and Maria allowed Sunshine to decline stepping up whenever it was practical to do so. This required paying close attention to Sunshine’s body language in order to observe signals of an impending bite and calmly remove their hands. Joe’s visual observations of Sunshine’s physical signals and Maria’s auditory observations of Sunshine’s vocal signals allowed them

to sensitively read where Sunshine “was at” before putting their hands near her beak. In doing so, they implemented an outstanding model of collaborative behavior management across caregivers.

At the same time, Joe and Maria decreased the frequency with which Sunshine chose to say no thank you with her body language and vocalizations by providing her with frequent positive practice stepping up throughout the day without returning her to her cage. They systematically reinforced every single step up response with a variety of praise, treats, items/activities, and sometimes even allowed her to step right back down where she came from. As a result of this high rate of positive practice, stepping up without hesitation increased and signally “no thanks” decreased.

There are always a number of different plans to address problem behaviors; however, for a behavior-support plan to succeed it must fit the values, skills, resources and routines of the caregivers who are responsible for implementing the plan. After some dis-



Putting loose hair up eliminated the cues for the occurrence of the undesired behavior.

cussion, Joe and Maria decided it was important to them to continue to allow Sunshine access to their heads and shoulders before she learned to step up fluently.

The functional assessment identified Maria's loose hair and Joe's ears as two antecedent "cues" for Sunshine's biting when she was perched on their shoulders. One way to reduce a problem behavior is to eliminate the cues for its occurrence; and so they did. Maria pinned up her hair before sitting with Sunshine and Joe good-naturedly chose to don a towel on his head to cover his ears! This produced an immediate reduction in biting from their shoulders which was of course reinforcing to Joe and Maria.

Finally, teaching Sunshine with positive reinforcement to station (stay) on a skewer in her cage prevented her from biting Maria's hands by the food doors. This strategy of reducing a problem behavior is called differential reinforcement of incompatible behavior (DRI). With DRI, the same amount, or more, reinforcement is delivered for an appropriate behavior that

physically cannot be accomplished at the same time as the problem behavior. In this case, Sunshine can't station on the skewer in her cage and bite hands at the food doors at the very same time. DRI allows us to reduce biting without punishment making it the most positive, least intrusive, effective strategy.

VIII. Follow up

Now, one year later, Maria is pleased to report that Sunshine continues to step up and have her cage bowls replenished without biting. When visitors are in the home, Sunshine occasionally nips but Maria and Joe are better equipped than ever to address this behavior now. Congratulations to Joe, Maria and Sunshine for their creative and effective application of positive teaching and problem solving!



Improving sleeping arrangements can reduce nipping associated with fatigue. Photo Credit: Karen Anderson