Wild Diets, Captive options

Part One

by Jamie Gilardi

Wild parrots get their beaks into all sorts of foods and their tastes change from day-to-day, and season-to-season. During my graduate work in the early 1990's, I had the privilege of studying large parrot communities in southeastern Peru near the now-famous clay licks along the Manu and Tambopata Rivers. My work specifically focused on what sorts of foods the 17 parrot species we observed (from parrotlets to macaws) consumed in both dry and wet seasons. Having recently published those findings with my former advisor, Catherine Toft (see www.psittascene.org) it seemed an opportune time to explore how wild diets can inform our approach to feeding captive parrots. To add depth to the discussion we've called upon EB Cravens as well – he graciously offered his thoughts on this topic from his decades of successful natural parrot care.

What did we learn from hours in the canopy watching wild parrots eat and hours in the lab testing the nutritional components of those foods? First, let's talk about specialists and generalists. While there are really interesting parrots in the specialists category - species like the Red-bellied, Lear's and Hyacinth Macaws (*Orthopsittaca manilata, Anodorhynchus leari* and *A. hyacinthinus*) which eat just one or two types of foods – they are generally the exception. The vast majority of parrots studied to date are the latter. They eat a highly diverse diet including virtually all plant parts like seeds, fruits, and nectar, but also flowers themselves, buds, bark, wood, and leaves. Many species venture beyond the Plant Kingdom, consuming insects and their larvae, and in some cases aquatic snails. There is even a New Zealand parakeet that has been observed pulling seabird chicks from their underground burrows and eating them live!

For Peruvian parrots of all sorts, we found that nearly all species eat a wide variety of foods, but mostly seeds in varying stages of ripeness. Not surprisingly, the parrots preferred plant parts which are high in protein and fat. What impressed us however, was just how rich some of these foods were when tested back in the lab - some nearing 50% protein and some over 50% fat - that's getting into pine nut territory!

The other piece of this puzzle we found intriguing was just how impervious these birds were to chemicals in their food items which are generally quite toxic to other birds and mammals. We tested various aspects of toxicity and found that parrots ate high quality foods whether they tested high in these toxicity measures or not. It turns out this diverse group of parrots comprises a marauding bunch of seed predators, flying miles around the rainforest and eating pretty much every nutritious seed or fruit they can sink their powerful beaks into. But aside from their role as consummate seed predators, how does this knowledge help us better provide for our parrots back home?

One place to start is to take note of the fact that there are some dramatic differences between wild parrots and captive parrots in terms of their food needs, especially their need for total energy intake. Wild parrots spend a portion of their day in flight, sometimes covering tens of kilometers at a stretch. Flying is expensive, roughly 10-15 times what it costs to sit on a perch! So if wild parrots are more or less the equivalent of olympic athletes they should eat comparably. Our captive birds on the other hand are, well, let's face it, couch potatoes by comparison. With that in mind, it's helpful to focus on two key aspects of the wild birds' diets which might provide useful guidance in the captive setting: diversity and toxins.

Wild parrots clearly indicate that dining diversity is good. But while we may strive to provide a variety of novel and diverse food items, the reality is that it can be hard to get parrots to eat them. Here in northern California, we adopted two African Grey Parrots last year. They're now entering their third and fourth decade of life, and are pretty set in their ways, especially around the food dishes. We've found that introducing new foods takes a combination of persistence and

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Offer wild foods in their natural state to stimulate exploration.

A captive Swainson's (Rainbow) Lorikeet samples blossoms from a *Hebe* tree.

patience. And very often, just about when we're giving up on a new item, they suddenly get interested and start eating it with vigor.

When thinking beyond seeds and pellets, an easy and safe place to start is with human foods. Just about anything in the produce section is safe and worth trying with the possible exception of avocados (although feral Amazons in Los Angeles apparently love them). Much like their wild brethren, it's likely your birds will also prefer fatty or protein-rich selections, especially when they're first introduced. Sometimes hanging items whole from a string or wire (carrots, celery, apples, pomegranates) turns them into destructible "toys" which may, with time, be worth eating. Leftovers from our own table are also an easy and safe way to expand the birds' diets. We too are omnivorous, so as long as you're offering healthy foods - items you might happily feeding a toddler, for example - they should be both safe and stimulating.

The toxin question is more complicated, both because wild plants themselves are generally loaded with complex chemistry, but also the degree to which different parrots experience these chemicals as toxic is hyper-variable as well. With those caveats in mind, one thing is absolutely clear: wild parrots evolved over millions of years, thriving on wild foods which nearly all contain a bewildering array of chemicals. Only when humans domesticated plants did most of the plant parts we think of as "food" come along. As we manipulated plants through selective breeding, we eliminated nearly all their chemical complexity. So, how do we translate the science into useful and safe guidance for feeding our captive charges? Here are two approaches which might be worth trying.

One option is to offer small amounts of (unsprayed) fruits, flowers, and nuts from your garden or neighborhood to guage their interest. Keep an eye out for what wild birds in your area are feeding on, and offer these in small amounts to determine your own birds' level of interest and moderate if necessary. With our greys, we've had some luck with privet fruits, very ripe olives, and some Pittosporum fruits. Interestingly, when offered branches of these items and others, the birds will often peel the bark off the branches, sometimes ignoring the fruit entirely. This brings me to the second option.

We often think about the term "browse" as fresh branches provided to birds with an aim to give them something to chew on, providing them both enrichment and a workout for their jaw muscles and conditioning for their beaks. You may find that your birds are not only chewing, they're actually consuming them as well. Large branches provide access to bark, wood, leaves, buds, fruits and seeds. You may discover that such branches provide a variety of benefits to your birds, possibly expanding their diets in new and interesting directions. And while most parrots are likely able to tell friend from foe, always identify the plants you're thinking of offering them. Avoid anything that's well known to be toxic to other animals and humans. There's no need to offer mistletoe, oleander, castor bean, hemlock, or anything else with "poison" or "deadly" in the name as there are thousands of other, safer options.

We can certainly learn a lot from wild parrots, and with a bit of forethought, their guidance can help us provide more diverse, enriching, and healthy options for our captive birds. Take it slow, see what's working, ask your parrot-loving pals about their successes, and of course, share yours with others.

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Part Two

by EB Cravens

The only sure way to adequately reproduce a wild parrot diet with a captive psittacine would be to live in the bird's native range, and release it daily to feed with others of its own kind. Rather impossible for most pet owners, right?

That being said, it is quite possible to make solid attempts at mimicking wild bird feeding tendencies with our domestic cagebirds. In doing so, we must first recognize that what we are seeking is not so much a "wild" diet, but a "natural" diet. Feeding a natural diet means that every effort has been made to eliminate severely processed foods from the food bowl. Not all such items are banished of course since proper nourishment (with occasional relished people treats!") is the ultimate goal with any parrot. But where possible, it is best to replace processed substances with raw, natural foods.

First of all, we should consider just how most parrots and parakeets eat. Have you ever watched an African Grey or Sun Conure consume a shelled walnut? They hold the nut in a foot (or bend down over the dish in the case of species such as Eclectus or Regent's Parrot) and slowly masticate the nut into a fine powder, consuming some, wasting much, and seeking out the important essential fats and oils. Unless they're in a hungry hurry or feeding ravenous chicks, few parrots will take food or nuts in big chunks. Instead they chew and chew, deriving nourishment and moisture from the juices, oils, mineral-rich crumbs, chlorophyll, plant enzymes and the like. That is precisely why there is often so much detritus to be observed falling from a tree where groups of wild parrots are feeding. A softbill or non-seed-cracking bird will ingest a whole guava seed. A psittacine will grind it to a pulpy mess. It's almost as if parrots prefer "blenderized" fare to a regular chunky meal.

Certainly most hookbills I have observed prefer soft foods – flowers, buds, young shoots, larvae, fruit pips, unripe seeds, etc. The whole desiccated extruded pellet concept along with dry commercial agricultural seeds inside hulls seems rather foreign to the evolved parrot digestive system. In order to work adequately, the birds would have to drink much more water than they are customarily programmed to do.

This is a main reason April and I cook the grains and sprout seeds along with all the natural raw foods we feed our flock. It softens them. In the late afternoon our birds get a measured helping of dry seed mix to tide them over until the next day's breakfast.

Now, whenever we contemplate a rough copy of wild bird feeding habits, we pay attention to what the wild birds in our region are eating. If springtime blossoms are on the menu, we like to go out and clip flowers from budding trees, cut daisies or marigolds, asters, snapdragons, flax or fruit tree buds and offer sprigs to our birds along with their daily feeding. Often the parrots will seek out these fresh items first to munch upon.

If summer brings Virginia creeper, thornapple, fig, mulberry, plum or acorn into fruiting, these nourishing items are added to our diet. Back in Santa Fe, NM, I used to clip boughs of young Russian olive, chamisa, quince or juniper and feed them to my amazons and lories. For the vegetable realm, we concentrate on stems and buds, items with crunch and nutritious fluids for psittacines to extract. Discarded tops of carrot and beet are a classic example of kitchen veggies that can provide browse for cagebirds. Broccoli or radish that has bolted and formed yellow or pink flowers and small green pods is an excellent example of things birds like to eat, just as seeding grasses and pods are consumed by wild flocks.

Farmers' markets, health food and grocery stores offer many fresh produce possibilities for persons wishing to expand their pet bird's

After her bath, Ika, a Brown-necked Parrot, enjoys fresh Mulberry browse in her aviary.

eating variety. We concentrate on fruits and veggies that produce green and ripe pips—guava, papaya, fig, pomegranate, passion fruit, tart green apples, organic peas, beans, and sprouted pulses. Leftover birdseed can be germinated and grown in the garden until it flowers and sets pods for parrots to eat. Safflower, sunflower, rape, millet, buckwheat, hemp, etc. are just a few; and they tend to be nearly irresistible to even picky parrots that do not partake of regular veggie chunks.

If dry seeds from the farm feed store or health food market are soaked for 24 to 48 hours and rinsed often, they will germinate or "pop" and change their nutritional spectrum to resemble green seeds birds seek out in nature. (see Sprouting for Parrots, *PsittaScene* 24.4 November 2012).

Don't forget about edible bamboos, palms, orchids, and herbs. Renowned amazon parrot expert, the late John Stoodley of England, used to write about adding cut stems and barky shoots to his feeding dishes every day. He believed it aided in digestion and provided browse for his psittacines' chewing needs.

Jamie is very correct when he states that greenstuffs in parrot feeding need to be offered every, every day! Parrots eat in phases and spurts. They do not seek out the same things in August as they do in March; they want different consumables on rainy low pressure days, than on dry sunny mornings; their bodies cry out for special nutrition when hormonal and in breeding fettle, when moulting, when feeding young chicks, or when "resting up and overwintering" as days are shorter and darker. If your pet discovers a raw food item that is good for it and it desires strongly, feed it frequently until that phase passes.

One last note. It is true that psittacines in the wilds like to uncover high protein and fat morsels to consume since they burn off so much energy living and flying. Captive bird owners should also think in terms of calorie burn off for their flock. Pets kept in too warm and cloistered an environment are a case in point. Cooler temperatures, outdoor wind, rains and sunshine, awareness and observation of other birds, hopping, climbing, hanging upside down, and foraging, noisemaking, etc. all help parrots remain active and burn off energy. Such activity is going to increase the appetite of pets, and help to channel their eating habits towards a diet that makes them feel sprightly, fit and emotionally alert.

We all may not be able to duplicate wild bird diets for our charges as much as we like, but in the end I believe that a green bud is a green bud, a watermelon or cantaloupe, or squash seed is still a delectable seed, and a coconut morsel is akin to a palm nut centre. Try to learn to think like a parrot, and your food choices for you flock will expand immeasurably…

A Red-lored Parrot living in a wild flock in California (USA) finds a variety of wild foods to satisfy both curiosity and appetite.