

**Here's
How
to Feed
the Eclectus
in Human
Care**

with Dr. Rob Marshall



Owners of Eclectus parrots (*Eclectus roratus*) know these precious birds have different dietary needs than have African greys (*Psittacus erithacus*), cockatoos (*Cacatuidae*), conures (*Aratinga/Pyrhura*) or other parrots. One of the well-known reasons for the specialized diet conversation is the “different” gastro-intestinal system Eclectus parrots have when compared to other psittacines. Rob Marshall B.V.Sc., M.A.C.V.Sc. (Avian Health) at Carlingford Animal Hospital in New South Wales, Australia, shared the key features of Eclectus digestion:

- a large crop size
- a wide thoracic esophagus
- a highly elastic and spacious proventriculus, which allows food much time to linger in it
- short food-passage time in the gizzard
- rapid movement of food through the small intestine after leaving the gizzard, and
- highly regulated crop emptying.

Gastric function is key to healthy digestion in these parrots, so we’ll take a look at the physical and chemical disintegration of food as it goes through the three stages of protein digestion. This will show the science behind the field observations supporting Marshall’s recommendations for feeding the Eclectus in human care.

As Branson Ritchie, DVM, PhD, Dipl ABVP, Dipl ECAMS, professor at UGA® College of Veterinary Medicine, Georgia, shared with the audience at Ziggy’s Haven Bird Sanctuary, Inverness, Florida, April 2, observing the wild population of a given parrot species offers the perfect clues for feeding that species in human care. “The best thing you can do for your bird is look at where it occurs naturally, and supplement its high-quality food with foods from that habitat,” Ritchie counseled us.

Marshall’s research of wild Eclectus offers valuable observations of behavior that not only reveal tips for what to feed the Eclectus in human care, the observations also reveal tips for how to offer these foods. It all makes even more sense when we take a look inside the bird.

Inside the Ekkie

First, Marshall points out, food goes through the cephalic phase. As food enters the proventriculus from the crop, the proventriculus fills with peptic enzymes to help break down protein molecules before sending food to the gizzard. One of Marshall’s presentations shows Pepsin and food filling the proventriculus together.

Second, Marshall points out, food goes through the gastric phase. As food enters the ventriculus—also called the gizzard or hind stomach—the ventriculus fills with Hydrochloric acid (HCL) to denature the protein bonds in the food.

One of the intriguing habits Marshall and his colleagues witnessed in the field, and something Eclectus parrot owners have com-

mented on, is the manner in which these parrots consume seeds. The astute owner will notice the Eclectus spending considerable time munching and crunching seeds and arils before consuming them.

Marshall explained to *In Your Flock* readers what we’re seeing: “They break the seed into smaller pieces, better exposing them to stomach acids, which reduces the workload of the gizzard. The gizzard in Eclectus is prone to overload because it has evolved on a soft food wild diet of fruit pulp.”

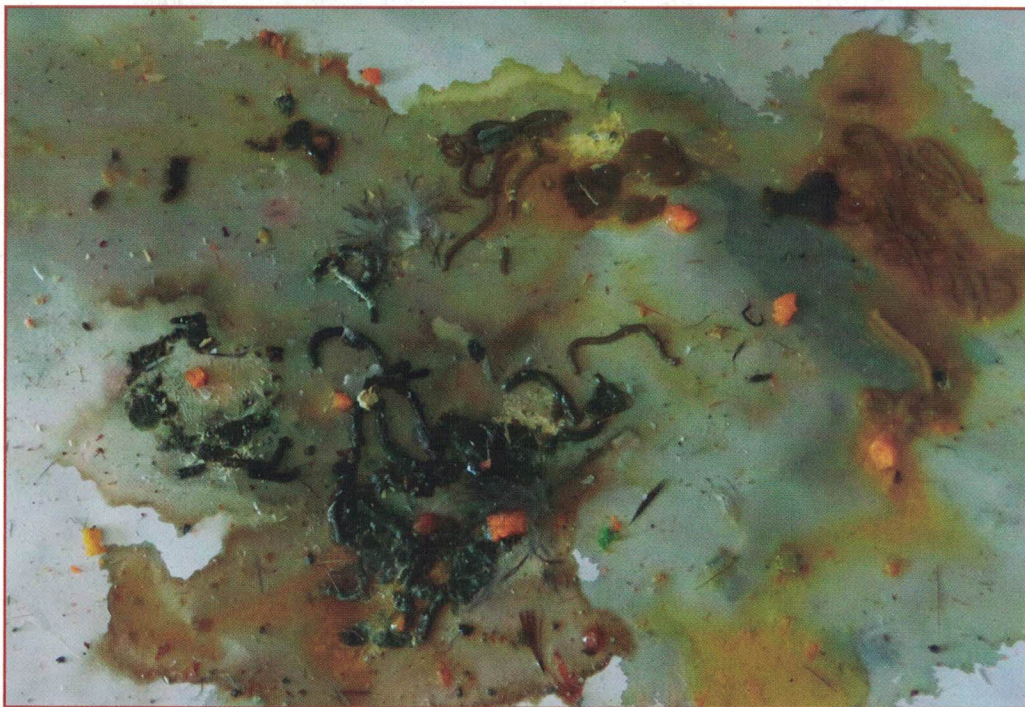
Third, food goes through the intestinal phase. Fast transit time and advanced protein digestion indicate a healthy digestive system. Marshall pointed out: “In clinical practice, functional digestive problems are encountered far more frequently in Eclectus than other parrot species.”

Eclectus parrot owners can tell their birds may be experiencing digestive problems when they see the typical health clues. Look for changes in droppings and dropping consistency. If the first morning dropping has bubbles and/or extra water, as illustrated in the picture below, it’s time to make a veterinary appointment. Marshall states that feather stress bars, discoloration and loss are signs of chronic digestive dysfunction. If your Eclectus parrot is plucking and barbering his or her feathers, don’t assume the problem is mere stress or boredom. Look at digestive health. Take your bird to the vet and discuss real Eclectus dietary needs.

On the facing page, Bobo the female Eclectus has posed for journalists before. She survived a true rescue situation and came to live at *In Your Flock* headquarters, via the excellent care and vetting process of Ziggy’s Haven Parrot Sanctuary LLC, Inverness, Florida, early in 2017.

Below, a female Eclectus in Naples, Florida, exhibited extremely watery and foul-smelling defecation a few years ago. The astute caregiver at It’s For the Birds who had taken her in got her veterinary care and antibiotics to resolve an intestinal issue. If you see an abundance of water or actual bubbles in your parrot’s first dropping of the day, discuss it with your avian veterinarian.

Both photos courtesy Editor Sandy Lender.



“Ninety-five percent of feather destruction behaviors in Eclectus have a physical base,” Marshall shared with *In Your Flock*. “Digestion dysfunction is the most common cause of feather destruction. This must be identified and resolved in the early stages before the destructive actions become habituated. They become habituated largely because the owners tell the birds to stop picking when they see the self-destruct, which causes an attention seeking behavioral problem. Habituation occurs in birds that are sedentary and lack exercise so their focus is on feather picking, which becomes a habit. Therefore, the feather destruction problem has physical and behavioral aspects. Even so, the feather destruction behavior will persist if the underlying physical cause is not attended to. These behaviors are definitely not related to boredom or misdirected foraging behavior.”

Let’s look to the field research that both Ritchie and Marshall put a high value on to see naturally occurring foraging behavior, and to learn more about the wild population’s dietary practices.

Wild Ekkie Life

The family tree is the focal point of Eclectus life with the female showing an urgent need to protect the nest. She will stay at the nest site while a group of males goes out to forage twice a day, and return with food for her. While studying Eclectus in the wild, Mar-

shall and colleagues investigated the wild diet and feeding habits of a family group of three males and one female of the Australian subspecies (*E. roratus macgillivrayi*) found in the lowland rainforests of Iron Range on Cape York Peninsular, Australia.

They observed the three males leave the family’s Kajoolaboo tree (*Tetrameles nudiflora*) together at first light to forage along the Claudie River. One broke away from the mini group to forage near the shoreline while the other two flew ahead. All three returned within a reasonable timespan of one another to the family tree. In the afternoon, all three went foraging together again. The next morning, at first light, they were off again, soaring into the forest canopy to find breakfast.

Marshall states this wild feeding behavior is highly regular, intermittent and offers enhanced protein digestion for the Eclectus parrot’s unique digestive system. For healthy digestion, these birds in human care must follow a similar morning and afternoon meal-time routine.

He told *In Your Flock*: “In the wild, Eclectus will fill their crops with food over a period of an hour or so in the morning. They eat on an empty stomach. The food eaten during this time will fill up the stomach and stretch it to capacity, which is critical to the gastric secretion of Hydrochloric acid and pepsin. In the evening, the crop and stomach have emptied of food and the same process of

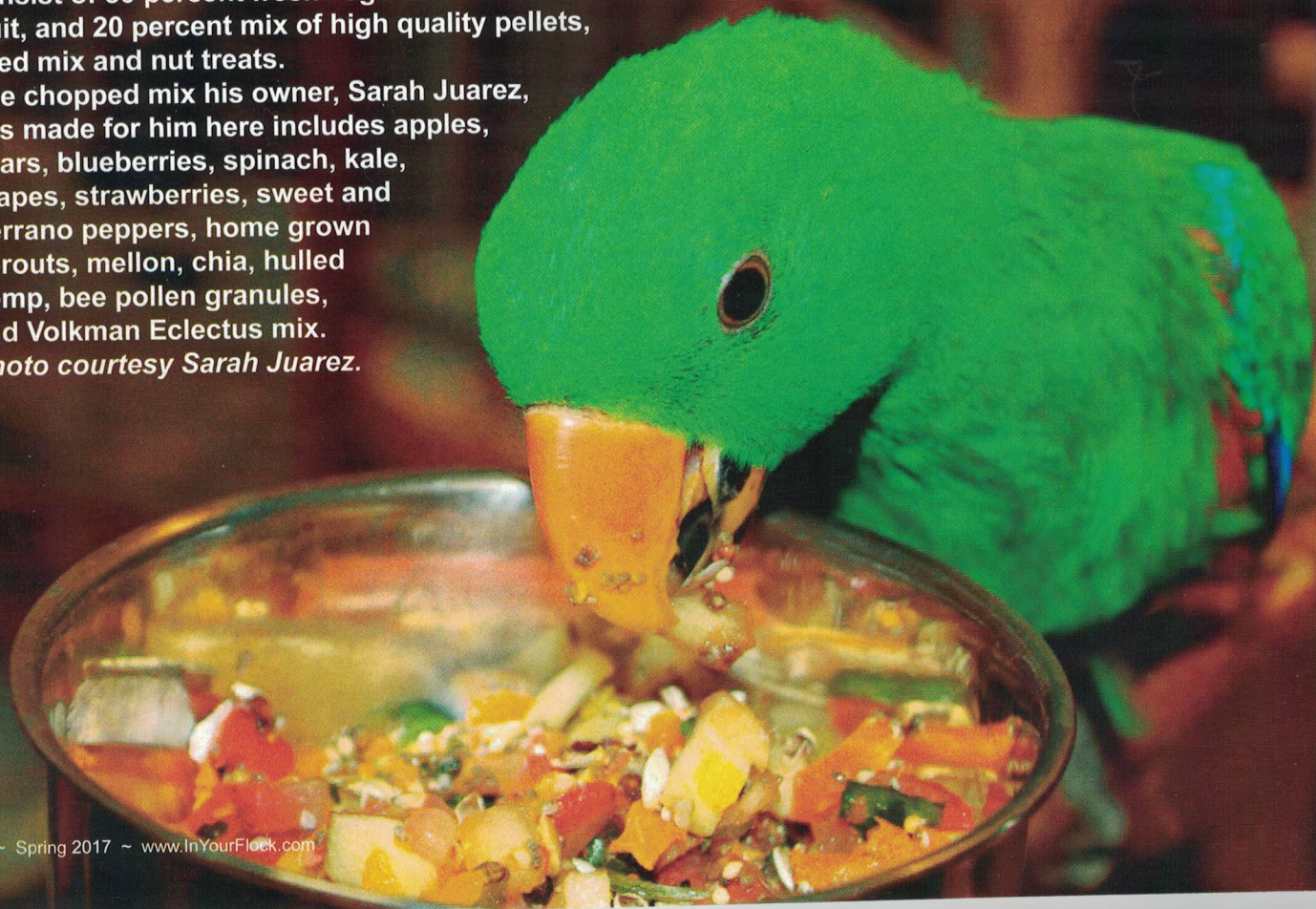
“In clinical practice, functional digestive problems are encountered far more frequently in Eclectus than in other parrot species.”

—Dr. Rob Marshall

Rocco Jr. is a one-year-old Eclectus. His meals consist of 80 percent fresh vegetables and fruit, and 20 percent mix of high quality pellets, seed mix and nut treats.

The chopped mix his owner, Sarah Juarez, has made for him here includes apples, pears, blueberries, spinach, kale, grapes, strawberries, sweet and Serrano peppers, home grown sprouts, melon, chia, hulled hemp, bee pollen granules, and Volkman Eclectus mix.

Photo courtesy Sarah Juarez.



digestion follows according to the principles of gastric secretion. Ultimately, this produces a fast transit time of food through the gut, which underpins their healthy digestive function.”

Where owners often go wrong, Marshall pointed out, is in feeding foods that “reduce the rate of food passage through the gut, which predisposes Eclectus to many complicated digestion disorders.

Remember Your Terms

Frugivore = From Merriam-Webster to medical dictionaries, this term means “feeding on fruit”

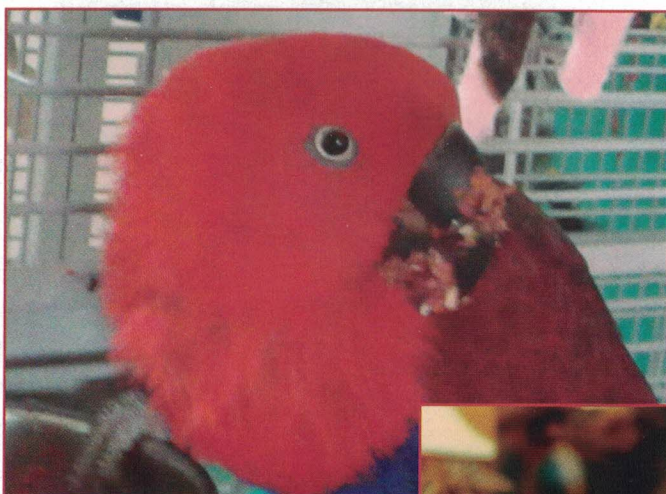
Granivore = “Feeding on seeds and grains”—typically applied to animals, usually stressing the eating of seeds

“In our study, Eclectus parrots were seen eating succulent pulp from the fruit of *Salacia chinensis* and *Leea indica*. The textural qualities, water and nutrient content of these fruits are typical of canopy foods eaten by Eclectus parrots, which make up the bulk of their natural diet.” (See Sidebar “Wild Diet” on page 34.)

In our homes, Marshall pointed out, “Eclectus parrots are commonly fed according to granivory, which explains their high incidence of diet-induced digestive problems. Such problems are averted and remedied by adopting feeding schedules that better suit a digestion model weighted towards frugivory.”

Marshall told *In Your Flock* readers: “Cultivated fruits lack the nutritional richness of rain-forest fruits. Therefore, we move towards cooked vegetables as a source of nutrients, and these are cooked to provide the functional requirements for healthy digestion in Eclectus. The foundation vegetables for Eclectus are cooked butternut pumpkin (squash), sweet potato, boiled rice and cooked legumes. On top of these we place fleshy commercially grown papaya, mango, passionfruit, pomegranate, kiwi fruit and dragonfruit. But these are sources of vitamins and microminerals rather than major nutrients and functional foods.

“In addition, you can add green beans, kale, carrot, and corn as foraging foods.” 🌱



Bobo's age is unknown, but her recent history is complex. She has recently discovered the tastiness of a chopped vegetable mix with fruit diced on top. She also enjoys pesticide-free hibiscus flowers.

Photo courtesy Sandy Lender.



Rocco Jr. can also rock a messy beak.

Photo courtesy Sarah Juarez.

ANTIQUE *Beak.com*

Avian Antiques and Collectibles



Avian themed Jewelry from Vintage to Fabulous!

Wild Diet

During Dr. Rob Marshall's observations of the Eclectus family in September through November 2015, he and colleagues started with an unpublished list of 17 fruits that researcher Sarah Legge at Iron Range National Park on Cape York, Australia, had

Fruits with soft, fleshy skin

- Canarium spp.*
- Black Sassafras (*Cinnamomum olivieri*)
- Cissus pentaclada*
- Cissus repens*
- Ficus spp.*
- Leea indica*
- Mackinlaya confuse*
- Acid Drop (*Melodorum leichhardtii*)
- Lime Berry (*Micromelum minutum*)
- Solitaire Palm (*Ptychosperma elegans*)
- Lolly Vine (*Salacia chinensis*)
- Damson Plum (*Terminalia sericocarpa*)
- Watery Rose-apple (*Syzygium aqueum*)
- Lilly Pilly (*Syzygium luehmannii*)
- Lady Apple (*Syzygium suborbiculare*)

Fruits that contain seeds surrounded by aril

- Golden Guinea tree (*Dillenia alata*)
- Tuckeroo (*Cupaniopsis anacardioides*)

observed in the park between December 1996 and November 2003. During the study, Marshall and colleagues confirmed the use of 15 of those original 17 fruits, plus 13 plant parts that could be added to the list. In a paper presented to the Association of Avian Veterinarians, Marshall lists the following confirmed Eclectus foods:

- Buttonwoods (*Glochidion spp.*)
- Fire Vine (*Tetracera nordtiana*)
- Brittlewood (*Claoxylon spp.*)
- Northern Tamarind (*Diploglottis diphylosteia*)

Fruits containing edible seeds

- Black Wattle (*Acacia melanoxyylon*)
- Pink Ash (*Alphitonia petrei*)
- White Ash (*Alphitonia whitei*)
- Red Ash (*Alphitonia excelsa*)
- Hopbush (*Dodonea lanceolata var. subsesifolia*)
- Grewia (*Grewia papuana*)
- Native Crepe Myrtle (*Lagerstomera archeriana*)
- Blush Macaranga (*Macaranga tanarius*)
- Macaranga (*Macaranga involcrata*)
- Celerywood (*Polyscias elegans*)
- Cape Tamarind (*Toechima daemelianum*)



An *In Your Flock* reader shared this adorable pair of male Eclectus parrots enjoying exercise time among comfy perches and Bottlebrush branches (*Callistemon citrinus*).

Resource Directory

American Federation of Aviculture, Page 25
www.afabirds.org

Antique Beak, BeakChic.com, Page 17
www.AntiqueBeak.com
www.BeakChic.com

Caitec, Page 4
(888) 338-2473
www.caitec.com

The Flying Gourmet, Pg. 11, 13
Contact: Liz Fuehr
www.TheFlyingGourmet.net

Kissinger, Megan, Page 27
www.megankissinger.com

The Parrot Place, Page 33
(616) 363-9008
www.TheParrotPlace.net

RabbitAir, Page 2
(888) 866-8862
www.RabbitAir.com

Sandy Lender Ink, Page 29
<http://sandy-lender-ink.teachable.com>

White Wings Farm, Page 11
Contact: Christa Grant
www.WhiteWingsFarm.com

Whittaker, Jamie, Page 8
(281) 217-0614

Your Company Name Should be Here, too, Page ????
Contact: YOUR NAME!
Your phone number
Your web address and/or email address goes here, too. This is part of your advertisement when you sign on to market with *In Your Flock!*

WWW.
INYOURFLOCK
.COM

HEY!

Only advertisers who exchanged cold, hard cash or hard-earned work are exhibiting in the pages of *In Your Flock* companion parrot magazine. We LOVE our advertisers for making this publication possible. Please check them out when you're looking for parrot products, goods and services. Let them know you saw them in *In Your Flock!* It's great to be growing together.