What do Wild Green Iguanas Eat?

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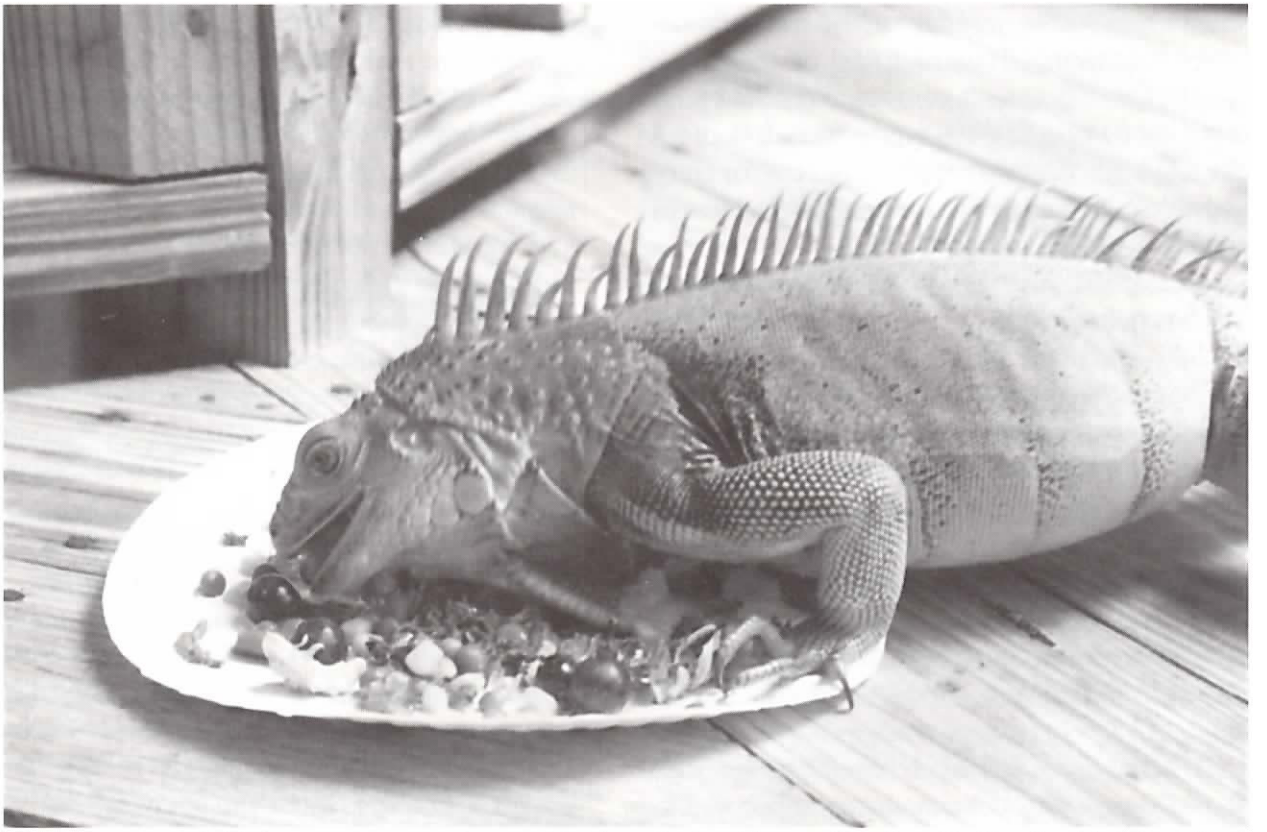
In an age of convenience, an abundance of artificial diets for iguanas (and many other reptiles) are readily available from a number of suppliers. These diets apparently are popular among pet owners—but are they truly popular, or even healthy, for the pets? Although billed by nearly all manufacturers as "a nutritionally complete diet," evidence supporting the claims for these diets may or may not hold up under close scrutiny.

How does one determine the proper nutritional requirements of an iguana? There are many factors here to consider, including much more than just the relative percentages of protein, carbohydrates, and fats. A plethora of vitamins and minerals must be supplied in proper quantities, and intake of natural fiber is essential to maintain digestive functions. Oversupplementation of protein and vitamins can result in serious health problems for an iguana. Moreover, nutritional requirements undoubtedly vary with age and reproductive condition of the lizard.

So, who has truly unraveled the mystery of proper iguana nutrition? I seriously doubt that anyone has. Nevertheless, we can rest assured that the typical diet of a wild iguana must be nutritionally complete.

Because so little is known about the natural diet of green iguanas, what is known can be communicated with relative ease. I simply wish to summarize the findings from several field studies conducted by highly qualified scientists. Although unpublished observations by naturalists most cer-



On her own accord, this free-ranging green iguana visits Finca Cyclura ("Iguana Farm") on Big Pine Key, Florida, to feast on a mixture of raw vegetables and chopped fruit. *Photograph: Robert W. Ehrig*

tainly hold additional details, the following three studies pretty much summarize what we know of the green iguana's diet in the wild.

Wayne Van Devender (1982), at his study site in Costa Rica, provided the first detailed analysis of the diet of green iguanas (15 juveniles and 5 adults). Whereas the spiny-tailed iguanas also present consumed considerable numbers of insects (juvenile iguanas in particular), the green iguanas fed exclusively on plants. (The widely held misconception that juvenile green iguanas feed largely on insects stemmed from a single observation published by a scientist in the 1960's.) Both juvenile and adult green iguanas fed mostly on leaves, but they also consumed fruit and flowers. The species of plants eaten were not reported.

Stanley Rand and colleagues (1990) evaluated the diet of green iguanas (31 adults) in Panama. Once again, leaves were most prevalent but smaller numbers of flowers and fruit were consumed. Animals, including insects, were absent from the diet. Ninety-five species of plants were surveyed at the study site. Whereas 26 species of plants were identified in their diet (mostly common to abundant species), only 1-4 plant species were eaten in a single meal; hence, if the diet is varied to meet nutritional requirements, it may be done so over a period longer than a few hours of foraging. Further, not all leaves were equally desirable: the iguanas expended energy to feed on some leaves rather than others closer at hand.

Wouter van Marken Lichtenbelt (1993), more recently, reported on the diet of green iguanas on the Caribbean island of Curacao. Of 54 plant species present, 24 were consumed by iguanas. Diet composition varied according to seasonal availability. The iguanas consumed mostly flowers during the dry period (February to May) to increase water intake—which still was too low for long-term maintenance. Early rains at the end of May stimulated the growth of young leaves, which soon began to dominate their diet (up to 78% by July). In August and September they ate a more mixed diet of leaves and flowers which gave way to mature leaves during the wet season (October to January). In wet years, fruit became important during the dry season, while in dry years mature leaves dominated their diet to a greater extent. Factors other than seasonal availability of plants and water contributed to their selective feeding preferences, including energy content and digestibility of food items, digestive tract capacity, costs of searching for an item, and protein requirements (especially for reproductive females). Although potentially important, secondary plant compounds (some exhibiting toxicity) were not considered in this study.

What can be learned from these studies? Clearly, green iguanas in nature are essentially strict vegetarians that feed on leaves, fruits and flowers having considerable bulk and roughage. The processing of every meal they consume occurs after it enters its mouth—not before, as in commercially supplied diets. They naturally consume a wide diversity of plant species (at least over the long term), thereby ensuring adequate nutrition. And supplemental animal protein does not appear to be a natural component of their diet.

I simply urge the reader to carefully consider offering their pets a diversity of natural food items—real plant parts—such as those recommended in the article by David Blair (this issue). Although preparation of the food by hand may be more time-consuming, it certainly is more economical and very possibly healthier for iguanas than the prepackaged diet approach.

Literature Cited

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