

Feather conditioning

An eight part series on making your bird look like the “**BEST IN SHOW**”! Or how to reduce your wild bird’s stress. (They are wild animals!)

ADVANCED BIRDIE QUIZ

Do birds see colors or just black and white?.

Why are vultures heads pretty much bare of feathers ?

Name four reasons why lighting is important to our pet birds.

I’m probably not the only grade school kid who came up with this theory but it worked in emergencies like a test on a subject I was having difficulty learning. Have an upset stomach, or runny nose, and if I could muster up a fever even better. After a couple days in bed watching cartoons, Dr. Mom checked my forehead and pronounced me “well” over all protest. By that time I REALLY did feel blah. “The fresh air will do you good” was the response. And mom was right. By the time I walked to school in the fresh air and sunlight I did feel better. And quite honestly I did miss my friends.

Unfiltered sunlight contains UV which synthesizes vitamin D3 which is necessary for the absorption of calcium. Most pelleted foods contain the nutrients to assimilate vitamin D3 and in turn Calcium. Even with the best lighting system it will come to nothing without proper nutrition. Radiation from the sun also works to strengthen the immune system. Germs and bacteria on the feathers and skin are soon reduced with radiation. Think of vultures (we know what they eat) and you’ll understand why their head and neck is almost bare of all feathers to expose quickly the high number of pathogens from digging into...well, you know. Veterinarians suggest at least 30 minutes in unfiltered natural daylight a day. UV fluorescent bulbs are a good substitute based on the rating of the bulb at a CRI over 90 and a color temperature of more than 5000K. CRI stands for color rendering index. The bulbs can not be filtered by a glass guard and depending on wattage should not be farther away then the first number i.e. a 40 watt equals 4 feet, 36 watt equals 3 feet. The bulbs must be replaced every year as the rare earth

phosphors generating the UV colors gradually disintegrate. The bulbs will still be bright but the beneficial radiation is depleted.

The two health benefits are not the only reason birds need light. Light conditions; duration and intensity determine **behavior**, depending on the bird's interpretation of light. Some are quite obvious to us. As the days get shorter the birds start thinking about migrating. Days getting longer and they better start molting to get some spiffy new feathers for the breeding season. In the previous articles of this series we were trying to simulate as closely as possible our pets natural wild environment. The more we can approximate the outdoor amount of changes in light conditions and length, the better our birds can act naturally and know when to behave like birds in the wild. The birds have an incredible mechanism to help determine when and what they should be doing depending on light conditions. Humans do not, so this should tell you how important the seasonal and daily clock is for birds. A special gland, called the Harderian, surrounds the eye and connects with two other glands in the brain that regulate growth and development. This gland was discovered in 1694 by Swiss anatomist Johann Jacob Harder and is still being studied by scientists. Variations in light are interpreted by the bird, and triggers activity as mentioned. Light variation triggers a diet change as well. Hummingbirds wintering in Central and South America eat more insects the closer migration time comes. They are storing up fat, protein and energy to make the Gulf of Mexico in one nonstop flight and then find a mate. Birds preparing to breed, based on light conditions, will seek higher fat content food. That's why bird food manufactures in part, produce diets with names like "High Potency" (Harrison's) and AvianBreeder (Zupreem). Those foods have more protein and fat content corresponding to the hummingbirds eating more insects. UV lighting with proper nutrition is essential for our pet birds.

And our final point to make is that humans can't see the blue and violet range of light that we're talking about nearly as well as birds do. Actually birds see all colors better than humans do. They need better eyes and better lighting than humans to **find food, recognized a mate, and many other daily and seasonal functions**. Humans however see better in low light when shades of gray predominate. The reason is that most birds, owls being an exception, have more cones than rods. You'll remember cones and rods in our eyes from fourth grade biology. Cones are for color; rods for gray tones. I was in school that day, and not at home watching cartoons that day.

Next month: SLEEPING Author: Allen Brelig, a graduate of IOWA STATE UNIVERSITY with a degree in biological sciences has written well over a thousand articles, more than 100 television programs, and has lectured throughout the United States and Great Britain. His work has been translated into several languages.