



BIRDS OF A FEATHER

Someone recently asked me to write about feathers, and what changes in color mean. When birds branched off from their dinosaur ancestors, they developed feathers. There is some debate as to if those feathered animals flew at that time, most say they did not. I will touch on some feather facts that will hopefully let you decide what is normal, and what is not.

Feather Tracks:

Most know there are no feathers along the keel, but many do not realize there are other featherless tracks under the wings, behind the legs, and in crested birds, on the top of the head. Most of these featherless patches are covered by surrounding feathers, and can cause the owners concern when noted for the first time.

Feather Types:

There are three main types of feathers; down, contour and filoplume (hair like). Birds kept in cooler environments will have more down, and may lose that down as the ambient temperature rises. Contours are the majority of the feathers we see; they protect the bird from the elements, and include the flight feathers. Filoplumes are the lash like feathers around the eyes.

Color:

The colors in the feathers of a bird are formed by true pigmentation or by light refraction from the structure of the feather.

Pigment comes from three different groups:

Melanin-which produce colors from dark black, reddish brown and pale yellow. Melanin provides more than color. Feathers with melanin are stronger and more resistant to damage. I believe this is why many white mutations of budgies and cockatiels have thinner, lacier feathers that exfoliate easily.

Carotenoids-Are produced from eating certain plants or something that has eaten a plant. Red canaries can be made redder by eating a special diet. Flamingos turn pink because of their diet. Carotenoids are also necessary for immune function.

Porphyrins-Are produced by modifying amino acids. There are many different chemical structures, and they can produce a range of colors from red to green.

Psittacofulvin-Is a unique red pigment found in some parrots.

Structural Colors:

Iridescent colors are always structural in origin. Blue colors are almost always produced by tiny air pockets in the barbs of feathers that scatter light. This is why blue or green feathers turn dark when they are wet!

Color Changes:

Genetic mutation changes occur from birth, or after the first molt. Many birds have a 'pied' gene that may present as a single off-colored feather.

Some viruses can cause abnormally colored feathers, though this occurrence is rare, it should be considered.

Nutritional problems have been shown to cause color changes.

Metabolic problems; such as liver disease, high stress levels (producing natural steroids), thyroid problems (very hard to diagnose in birds).

Molt:

Birds molt (old feathers fall out, and are replaced with new one) once or twice a year. After following my macaws' molt for 21 years, I can tell you it is not regular. She may molt every six months or go over a year. Showers help keep older feathers healthy and stimulate normal preening. When new feathers come in they are blood feathers, or have a blood supply in them. Occasionally a bird may fall or hit these new feathers and they bleed. This can be a medical emergency and you should contact your avian veterinarian.

Damage:

Mutilating feathers or feathers and skin, should always be considered a medical concern. We are aware of more medical issues that cause a bird to damage feathers. So it is always best to seek medical advice when they start damaging feathers.

Plucking physically hurts, so we believe some birds pluck for the endorphin release, causing a sort of "runners high". Though it can be caused by true medical problems. The uropygial gland should always be checked when the plucking is around the tail area.

And finally, the current buzzword is foraging. It is what a bird must do in the wild to find food. Foraging systems make birds 'work' for food, treats or toys. Some studies show birds are more active and spend less time over preening if they forage. There are many new ideas out there. Just remember, many of our birds will have to be shown how to forage—don't assume it's a bad idea if the bird doesn't take to it, if they can't figure it out, try something a little easier, like a small paper bag. Not only is it good occupational therapy, but it provides great bonding time.

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