

The Red Factor Sun Conure Color Mutation

By Marcy Covault, April 2013 © All rights reserved
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Over a decade ago, a new sun conure color mutation— commonly referred to as “red factor”— was visually expressed in a pair of sun conures in Hawaii. Since then, breeders and pet owners, primarily in the continental U.S., have been collecting these lovely gems. Still uncommon compared to normal sun conures, the red factor sun conure has sparked the interest of those who study color mutations.

From what is known about this color mutation, I have observed and concluded the following thus far. This is based my experience and that of some other breeders with whom I have communicated.

What does the “red factor” look like? Are there variations in shade?

There is a characteristic reddish orange translucent wash over and replacing part of the yellow of a normal sun. The intensity of this color can vary somewhat, from very reddish-orange, to medium reddish-orange, with an occasional “light red” (pale red-orange wash over yellow, almost indistinguishable from a more colorful normal sun). [Note that since feather color appearance is affected by light refraction, two pictures of the same bird under different lighting conditions can make a bird look darker or lighter, so a bird “in person” may look somewhat different from a picture of that same bird.]

After the first young adult molt, a dappling effect can be seen over the back. With age, these birds typically fade somewhat, so that even those birds that are darker reddish-orange as babies will usually be medium orange-red as adults. They are still distinctly different from normal color sun conures.

When the babies are first pin feathering, one can determine which will be red factor by the blue-red cast of the beginning feather tips on the head, which then open up into reddish-orange. Also, on the upper wing coverts and back, there is a reddish-orange overlaying the yellow that shows to varying degrees at this age. Most adults will be a pretty consistent reddish-orange (with minor variations), with an occasional individual a deeper red-orange or a lighter red-orange.

What is the inheritance mode? The red factor appears to be dominant but is not sex-linked, so that either male or female must be visually red factor to carry the color gene(s), and either visually red factor parent can pass the color on to offspring. A non-visual bird cannot be split to



18 month old red factor female



Young adult pair of red factors

(carrying recessively) the red factor since it is a dominant inheritance. Two visual normals, no matter how reddish they may appear, will NOT produce a red factor.

There is speculation that normal color suns produced by a *red factor x red factor* or *normal x red factor*, when then paired with a red factor, will produce more color (i.e., if the red factor influences offspring color of a normal sun)—but that is likely more a function of the individual birds.

Some pairs do produce more early color than others, but that doesn't mean adult color will be noticeably different.

What is the cumulative influence? There appears to be a **cumulative** color inheritance, as with many of the color mutations of other parrot species (e.g., the yellowsided and cinnamon-yellowsided green cheek conure). While breeding two colorful red factors together may ensure more colorful offspring, it appears to be more complicated than that.

With the red factor suns, there is a saturation point (not understood at this time) where the color becomes "too much of a good thing". The resulting offspring are "dark red", with the yellow being mostly replaced, so that the wings, for example, have an almost bronze-tone to them. Some have postulated that these are "double factor", but I believe that to be incorrect in concept. When two red factors breed and this "dark red"



Normal and red factor babies



Normal, "dark red", and typical red factor babies

The "dark red" metabolically challenged sun conure youngster does not survive much past weaning.



offspring results, the color so far is *always indicative of a metabolic malfunction*. At 8 to 10 weeks, rather than progressing normally, these “dark reds” begin to lose motor function, and eventually cannot fly or even eat independently. The youngster has to be euthanized by about 4 months. Autopsy shows brain lesions and an abnormal spleen, with a veterinarian hypothesis that there is a metabolic imbalance that is genetic and is expressed visually in the feather color. Whether that can be overcome, i.e., “dark red” birds produced that survive, is not known at this time.

What’s the best way to get color? Breeding two deeper red factor suns will usually produce a deeper red color, but you are likely to also get the “dark red”, so that’s a decision for the individual breeder, as it is very unpleasant to watch a youngster go downhill and have to euthanize them. By breeding normal to red factor, one should get mostly medium color reds, with an occasional darker and an occasional lighter. I have gotten light, medium and deep red babies in the same clutch from a normal x red factor pairing, though medium is most common. In consideration of the apparent cumulative effect of the color, the next step may be to breed a *light red* individual to a medium or deeper red individual to see if consistent deeper color can be maximized without producing the metabolically-challenged dark red.



Four red factors and a normal sun

Other discussion

Is there a temperament difference? The red factor is a color mutation, and there does not appear to be any difference in temperament from a normal sun conure.

What is a “tangerine” sun conure? This is not an accepted color denotation. Some have said “tangerine” is another name for “red factor”, but that is confusing rather than helpful, in my opinion. Some have called a normal sun that has a lot of red around the eyes and around the beak a “tangerine” or “red” sun, but it is NOT the same as a red factor. There is variation in color of normal suns, from more yellow to more red, but again, it is NOT the same as a red factor. That is one reason though that it is important to know the parents of a particular bird, as only when one of the parents is a true red factor can an offspring have the potential to be a red factor.

What about “color feeding”? Can suns be “color fed” like canaries, i.e., red encouraged? Possibly to some extent, although that’s debatable among aviculturists and that’s a topic for another article! That is not relevant to the red factor color mutation.

Is the red factor sun a purebred or a hybrid? The red factor sun is a purebred, and is NOT a hybrid with another conure species (e.g., jenday). The color pattern alone, which is typical of a sun conure, would dispel any conjecture of hybridization.