BEARDED DRAGON MORPHS

HYPOMELANISM

Hypo is short for hypomelanism, which literally means “less melanin”. Melanin is a pigment that is found all throughout the animal kingdom. Melanin can take several different chemical forms, which each have their own unique colour, but it is usually brown or black (it can also be red, but don't worry about that).

The hypo trait in bearded dragons is a recessive mutation that causes the dragon to produce less melanin. Recessive means that the dragon will only display the visual signs of the trait if it receives that trait from both of its parents. If it receives the trait from only one parent, then it will only carry the trait and will not have any of the visual signs.

Hypo bearded dragons have clear nails without the usual brown stripe of melanin running down the top of each nail. The hypo trait also helps to reduce the amount of melanin in their scales so that other colours appear more vibrant.

TRANSLUCENT

Trans is short for translucent, which means to be transparent or see through. It is a recessive mutation that causes a partially see through skin, and solid black eyes.

Trans hatchlings have blue underbellies caused by a black lining of their internal body showing through their partially translucent skin. They can also have a blue tint in other areas, especially to the skin above their eyes. This blue colour tends to disappear as they grow and their skin thickens, but some dragons retain some of this blue throughout their lives.

Trans dragons typically have solid black alien looking eyes, with no visible iris or yellow colouring, but this is not always the case. Trans dragons can have completely normal looking eyes, or eyes that are only partially darkened and still show some areas of gold iris. They may also have one black eye and one relatively normal looking eye.

The eyes of trans dragons can also change dramatically as they mature. Over a period of a few days their eyes can change from solid black to looking completely normal. Their eyes may then darken again and continue to change back and forth until settling on a final appearance. The exact reason why the trans mutation causes these changes to skin and eye colour are unknown.

Sometimes the term ‘partial trans’ is used to describe dragons that do not have fully black eyes. This is a misunderstanding of the genetics and only creates confusion. There is no such thing as a partially trans dragon. A dragon that is homozygous (received the trait from both of its parents) for the translucent mutation is trans regardless of the exact appearance of its eyes.

A final word on trans dragons... don't believe everything you read.

Today the internet is filled with out-of-control myths and gossip about the trans gene. Just about every health issue imaginable has been wrongly blamed on the trans gene with zero data to backup these claims.

PARADOX

Paradox bearded dragons are some of the most beautiful, rare, and sought-after dragons. Paradox bearded dragons have patches of colour that appear to occur randomly anywhere on the body, with

no pattern or symmetry to them. They often look as if paint splattered on them, leaving patches of colour wherever the paint happened to land.

Paradox dragons can be any colour. Some breeders refer to them as “purple paradox”. Throwing the word purple into the name is just a trick to make them sound more interesting. Paradox dragons don't need any tricks to make them sound more interesting because they are already the coolest dragons out there!

But if they are purple, then why is it a trick to call them purple paradox?

Because most of them aren't purple. The bizarre patches of colour that appear on paradox dragons can be blue or purple. Blue and purple are so unique that they have become known for it. But they can have patches of any colour and most of them are not purple or blue.

In fact, colour wise some paradox dragons are downright drab. They are awesome anyways just by being paradox. The quality of paradoxing has two measures. The first measure is colour. The second measure is how much of the dragon is covered with paradox colour shifts.

The best dragons have vibrant colours and lots of distinct paradox patches. But a dragon that is low in one measure, may still be highly sought after by being high in the other.

Dragons do not hatch from their eggs looking paradox. They start out looking completely normal. The colour shifts develop in the first few months of life. When the transition is finished, the dragon can look very different then the colours he started out with.

The paradox trait is not entirely well understood because it is not caused by any one single genetic mutation. The other traits discussed in this section are each caused by one specific mutation. No one yet knows how many genes go into the development of paradoxing.

DUNNER

I am a big fan of the dunner trait. I love working with it for the beautiful patterns it creates.

The ‘natural’ pattern for bearded dragons is to have stripes that start at the spine and run out to each side. Even if the pattern is subtle, it still has a side-to-side direction. The dunner mutation changes that.

By breaking up the pattern, the dunner mutation causes spots. Scales and spikes tend to be coloured individually to form an intricate pattern of small spots. When dunners have a pattern with a clear direction, that direction tends to run from head to tail.

But what if a dunner is all one colour? How do you identify them if there isn't a pattern? Fortunately, there are other characteristics that make identification easy.

The dunner mutation changes the direction of the scales. On the beard of a dunner the spikes point out to the sides. On normal dragons the beard spikes point down towards the belly.

The scales on the belly of a dunner point in many different directions, causing them to look disorganized. On the rest of the body the scales and spikes are more raised and textured because of this misdirection.

A leatherback dunner won't have spikes due to the leatherback trait, but she won't feel smooth to the touch either. She will feel like gritty sandpaper because the dunner trait causes her spikes to grow in many different directions.

Dunners have a unique behaviour that is not shown in other bearded dragons. After eating they tend to hold their food in the back of their throat for a long time, sometimes hours, before swallowing it. I have no idea why they do this.

Occasionally this behaviour creates issues for hatchling dunners. They hold their food in the back of their throats and then regurgitate it later instead of swallowing it. Most dunners don't have this issue and they grow just as fast and hardy as other dragons.

The ones that do regurgitate outgrow the habit by the time they are old enough to ship. They continue to hold food in the back of their throats throughout their life but are not negatively affected by the behaviour.

GENETIC STRIPE

When it comes to stripes, there are a confusing number of different terms. Colour stripe, genetic stripe, phantom stripe... Without good definitions for these terms, it’s enough to make your head spin.

The only stripe term that refers to a mutation is genetic stripe.

Genetic stripe is a dominant mutation that causes a clear racing stripe on each side of the spine. The stripes run all the way from neck to tail and can often be seen extending into the tail. Depending on the dragon's colour the stripes may stand out boldly or be less visible.

In all other cases where a dragon has stripes, that are not clear, straight racing stripes, you are NOT looking at a mutation.

Bearded dragons naturally have special colouring on each side of their spine in the form of large spots. In some dragons the spots are so large, that they are not separate from one another. Instead, they blend into one another to form a continuous band of colour.

These bands of colour are caused by many genes working together, not any single mutation.

Dragons that have these bands of colour, but do not have the genetic stripe trait, are sometimes labelled 'colour stripe' or 'phantom stripe'. Some breeders try to capitalize on names like these because they sound interesting. Labels are fine, but when you are picking out a dragon, put what you like above any label. Especially when that label does not refer to an identified mutation.

LEATHERBACK

There are two different mutations that cause leatherback. The first, and most common is a co-dominant mutation. Co-dominant means that its effect is more extreme in animals that receive the trait from both of their parents (homozygous), then animals that receive the trait from only one parent (heterozygous).

The second leatherback mutation is recessive. We will talk about that more when we discuss micro scale dragons.

Leatherback dragons have one row of spikes running down each side of their body, as well as spikes on their beard and head, but they have little to no spikes anywhere else on their body. Their back and tail have smooth, uniform scales, and their legs also have little to no spikes.

As with any trait, there is variation from one animal to another. Some leatherbacks have small residual spikes on their backs that look more like enlarged scales then true spikes.

You may come across the phrases 'Italian leatherback' and 'American leatherback'. These are outdated terms and don't mean anything. Co-dominant leatherback was first discovered in Italy. Another co-dominant mutation which causes the exact same effect was later reported to be discovered in the United States.

Without genetic analysis there is no way of knowing if these really are two different mutations. There is no visual way to tell the difference between these two co-dominant mutations if they even are two different mutations. One does not cause a dragon to be smoother than the other.

SILKBACK

So far, we have only talked about the leatherback mutation when a dragon inherits it from just one parent. A dragon that inherits co-dominant leatherback from both of its parents (homozygous), is called silkback.

Silkback bearded dragons not only do not have any spikes, but they also do not have any scales. They only have scale-less skin; Skin that is very thin and very sensitive to damage, Bayntons Reptiles does not breed these.....Bad form if you do....

It is unfortunate that some breeders still produce silkback dragons. Silkbacks have a lot of skin issues and are more easily injured. That is why I believe it is unethical to produce silkback bearded dragons. You will never see silkbacks being produced at Bayntons Reptiles.

All reptiles have skin. A reptile's scales grow out of the top layer of their skin, similar to how hair grows out from the skin of mammals, and feathers grow out from the skin of birds. Their scales are protective and the skin beneath is not meant to be exposed.

Silkback bearded dragons need regular baths as well as lotion to help loosen shedding skin. It is very common to see silkback dragons that are missing toes or the end of their tail. This is because without a protective layer of rigid scales their shed skin is prone to drying and tightening around small body parts and cutting off circulation. A juvenile silkback dragon that is not bathed regularly to help remove shed skin, is a risk of losing toes and other body parts to this loss of circulation.

Silkback dragons are also sensitive to skin damage. A silkback dragon can never be housed with another bearded dragon. Even if there is no aggression between them, the other dragon's nails will cut a silkback any time they come in contact.

Any other semi-sharp objects in the habitat that would not affect a bearded dragon that has a protective layer of scales, may cut a silkback dragon.

The silkback condition should be considered a genetic defect because the condition hinders their ability to live a normal, healthy life. It is also not necessary to produce silkbacks in order to continue to enjoy the leatherback trait. So long as only one dragon in a breeding pair is leatherback, then the pair will produce leatherbacks and 'normal' scale dragons, but no silkbacks.

The recessive leatherback mutation cannot be used to produce silkbacks. Only the co-dominant leatherback mutation can produce silkback.

MICRO SCALE

A micro scale bearded dragon is what you get when you combine the co-dominant leatherback mutation (heterozygous) with the recessive leatherback mutation (homozygous).

Micro scale bearded dragons look similar to leatherbacks but have even fewer spikes. They do not have spikes on their beard or on the sides of their body that leatherbacks have. They may have a few small spikes on the sides of their body, but no more. The spikes crowning the back of their head are typically smaller than normal.

ZERO

Zero is one of three mutations that all result in patternless bearded dragons. All three of the patternless mutations are recessive.

Zero is the most recent of the three patternless mutations to be discovered. In my opinion they are also by far the most beautiful of the three. Not for long but lol sshhhh, Zeros are a silver off-white colour, but they can also be darker shades of silver or grey.

SILVERBACK

Silverback is the last of the three recessive mutations that result in patternless dragons. They are the poor cousins of the patternless traits.

Having originated in Japan, the silverback mutation never gained much interest in the United States. Silverback was the first of the three patternless mutations to be discovered. However, witblits and zero, being far more popular patternless traits, have largely replaced any interest in the silverback mutation.

Despite its compelling name, silverback is a rather uncompelling mutation. Hatchlings are born with normal patterning, which fade to a patternless or near patternless appearance over several months.

Their final colour tends to be a dull off white or earth tone. Their name evokes an image of a shiny silver white zero dragon, and unfortunately the silverback trait fails to deliver on that image.

Take caution when buying dragons that are advertised as possible het silverback. The silverback trait is extremely rare in Australia.

Unless the breeder can produce photos of visual silverbacks in their breeding collection, which they probably can't do, then it is very unlikely that the dragons they are selling actually carry the silverback mutation.

A wero is a combination of zero and witblits. Weros are homozygous for zero and also homozygous for witblits. They generally resemble zeros but have splotches of darker colour that usually appear on their back and tail.

ALBINISM

Currently there are no albino bearded dragons. The category is included here only to explain why white dragons are not albino. An albino is an animal that cannot produce any melanin, and because of that are completely white.

Albinos are all white and have red eyes. The reason why their eyes are red is because there is no pigment to mask the blood vessels in their eyes.

All dragons that are white or nearly white produce melanin, and do not have red eyes. All reports of albino dragons that are rumoured to have hatched, resulted in the dragon being weak or unhealthy and dying. There has not yet been a strain of albinism discovered that is viable for producing healthy, breedable bearded dragons.

LEUCISM

Leucism is related to albinism. Leucistic animals have a significantly reduced amount of melanin, but do not completely lack all melanin like albinos do.

Leucistic animals may be white, patchy, or just lighter than the normal colour of the species. Leucistic animals do not have red eyes. Only albinos have red eyes.

Hypomelanism, zero, and whitblits are all different examples of leucism. They are all examples of a mutation that reduces the amount of melanin the dragon expresses.

White colour morphs which may go by the names John snow, ice, and blizzard are not leucistic. These colour morphs are the result of many genes working together and were developed through many generations of selective breeding. Their white coloration is not caused by a single genetic mutation.

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