

“Rare Colours”

So you have been diligent in doing lots of research looking for a German Shepherd Puppy to join your family. Then you come across an advert for “RARE” Blue German Shepherd puppies KC Registered, costing quite a lot more than the Black and Gold puppies you have been looking at. Looks very interesting, KC Registered, Rare Colour, much higher price, they must be special, right?

Each pure bred breed of dog has a breed standard which is the blueprint of the ideal specimen of that breed. It is a written detailed description of the physical structure, movement, characteristics/ temperament, coat and colour. The German Shepherd Dog breed standard is very detailed to define, maintain and preserve uniformity in the distinct appearance and purpose. The continued preservation of these qualities depends on breeders understanding the breed standard and selecting breeding pairs most likely to produce puppies that conform as close to the breed standard as possible . Accurately interpreting the written description of the standard can be a little difficult but colour is more easily understood. The colour for the German Shepherd approved by the UK Kennel Club and the WUSV/SV (Germany) describe the colours should be Black or Black saddle with Tan, or Gold to light Grey markings. All Black, all Grey with lighter or Brown markings referred to as sables. The nose must be Black with all coat colours, faded colours defined as lacking in pigmentation, Blues, Livers, Whites and near Whites are highly undesirable. The final colour of a puppy is only ascertained when the outer coat is completely developed.

Now it is important to point out that colour has no effect on the dog’s Character/ Temperament, Fitness to work, Trainability or Suitability as a loyal family companion. There is a beautiful variety of coat colouration accepted within the Breed Standard. The most recognized colour is Black and Gold which can vary depending on the amount of Black extending over the dog and the Gold colour can vary from very pale to deep Red. A Sable coloured German Shepherd can range from Grey, Sandy or Deep Tan Coat which can have several colour shades in each hair shaft overlaid and tipped with Black, the extension of Black can vary which would then give a considerably darker overall appearance to the Sable colour. Black is a solid Black coat colour with no other colour hairs. Bi Colour is a Black dog with small Tan areas on the cheeks, eyebrows, lower legs and throat. A Black line of hair extends down over the hock to the feet on the hind legs. A tapering line of black extends from the elbow partly down the side of the front legs with black hair across the toes. This colour does not really change from puppyhood to adult. In all these colour variations the German Shepherd will have a Black nose. The Genetic Inheritance of coat colour is extremely complex, but a very brief and simple explanation which is applicable to the genetic colour inheritance that will produce Blue or Liver will give a clearer understanding of the subject in this document.

- Colour is produced by the pigment Melanin. Eumelanin (Black which affects the colour of hair, nose, eye rims, pads). Pheomelanin (Yellow/Red which affects hair colour only). There are certain genes that affect the pigment colouration and position of these two on the dog.
- The genes work in pairs, which may be the same or a different version of each other, Dominant or Recessive, inherited 50% from one parent, 50% from the other.
- A Dominant gene only needs to be present singly to be expressed (seen in the colour) or Recessive which means it must be in duplicate to be expressed (seen in the colour) and carried by both parents.
- The Blue or Liver colour trait is a recessive gene. If a puppy inherits a double recessive gene for Blue or Liver this dilutes the Black colour created by the pigment Eumelanin preventing any black pigmentation. The hair, nose, eye rims and pads will be a Bluish Grey in a Blue dilute or Brown in a Liver dilute, and when present a gene will dilute the Pheomelanin. The colour of the eyes would also be affected and would be much lighter. So as a result of these recessive genes the coat colour would be all Blue, Blue and Tan, all Liver or Liver and Tan all of varying shades.

Most German Shepherds of any of the Breed Standard accepted colours only carry the dominant black genes and when mated together will NOT produce Blue or Liver coloured puppies. But a few do carry a single recessive gene for this dilute trait; therefore various hereditary combinations of genes are possible. The following are a few examples.

- When mated together if one parent carries double recessive Blue or Liver genes (so the dog is that colour) the other parent carries double dominant Black (so is example, Black and Gold) the resulting puppies would all be Black and Gold (although possible some paling in colour), as only one copy of the recessive gene could be passed on (recessive needs two to be expressed).
From this breeding pair although all the pups were Black and Gold they would all be “Hidden” carriers of the Blue / Liver gene. Called “Hidden” because you can't tell by the dogs colour due to inheriting a Dominant gene for Black from one parent and a Recessive gene for Blue / Liver from the other parent.
The Dominant half of the gene pair (Black) would override the recessive therefore having no effect on the Black pigmentation.
- If by chance two Black and Gold German shepherds are mated together and they are both “Hidden” carriers of the recessive gene , so both have a dominant and recessive gene each, very occasionally a Blue or Liver coloured puppy may be born in the otherwise Black and Gold litter of puppies.

The Blue or Liver puppy had inherited two copies of the recessive dilute gene, one from each parent.

Some of the litter inherited only the Dominant Black genes from each parent producing Black and Gold pups that would NOT carry a recessive gene.

Some of the litter although Black and Gold may now also be "Hidden" carriers if they inherited both the dominant gene from one parent and recessive from the other.

The reason that Blue /Liver or other non breed standard colours are not common (so called rare) is that for over a hundred years breeders of German Shepherd Dogs upholding the breed standard have not included them in their breeding programme reducing the incidence of producing a colour that deviates from the breed standard . Puppies of these non breed standard colours go to homes as companions where they would not be bred from.

IT WOULD NOW SEEM PEOPLE DELIBERATELY PRODUCE THESE COLOURS IN GERMAN SHEPHERDS by selecting them to breed from without giving any consideration in upholding or respecting the breed standard to follow their own personal colour whims or for financial gain selling them at inflated prices, claiming they are "Rare".

A look at the KC Breed Record Publication shows amongst the litters registered of accepted standard coloured puppies , there is a growing number of colours not accepted in the breed standard (the KC does make reference that these colours are not breed standard). For example Blue, Powder Blue, Blue and Gold, Blue Sable, Liver, Liver and Tan, Liver Sable, Isabella and Tan, (Isabella is a fawn colour which is a dilute of the Liver colour trait) and many other colour descriptions. As these are entire litters of puppies with non standard colours, this would mean both parents are also non Standard colours because each parent only has a double presence of the recessive Blue or Liver gene to pass on to their puppies. If breeding for these colours is because the breeders like the colour, why breed German Shepherds, why not choose a breed of dog where the colours are accepted in their own breed standard.

Specifically breeding to produce a particular colour must never be at the expense of the resulting puppies' health, temperament and structure. Although some breeders are health testing their breeding stock , Hips, Elbows, etc and colour in itself is not a health issue, the aim to produce non-standard colours will restrict which German Shepherds they can breed from, limiting the gene-pool available (as explained in the inheritance of colours). Imports of non-standard colours from other countries especially the USA have increased and hopefully they are all health tested. But if the main reason for their selection is colour without full knowledge of the German Shepherds in their pedigree which is gained by researching as much information as possible of the dogs in its bloodlines especially parents, grandparents and siblings for health test results, temperament and construction this could be highly detrimental for the breed.

Of course this applies to anyone breeding German Shepherds whether non-standard or breed standard colour. Complying with the health checks recommended for the breed is so important to the future of the German Shepherd Dog.

It maybe to justify producing Blue, Liver etc coloured German Shepherds that the breeders often quote the words of Captain Max von Stephanitz (the founder of the breed in 1899) "GOOD DOGS ARE NEVER A BAD COLOUR" , at the time these words would have referred to .. A German Shepherd that was an excellent example of the breed then the coat colour would be of no importance. The question is do all the German Shepherds of non standard colour really match up to the breed standard in all but colour? So although the genetic inheritance of colour is complex , it is a very simple fact that if you mate two German Shepherd Dogs of non breed standard colours e.g., Blue or Liver together the puppies produced will now all be a non standard (quote .."Breed Standard" "Highly undesirable") colours. Uncommon in the breed for the reasons explained, but not "Rare" when people select Blue/Liver colours to breed from and even base entire breeding programmes on them.

To Summarise

If the colour of the German Shepherd is mainly aesthetic why is there an issue with non standard colours?

The concerning issue is people deliberately breeding German Shepherds to produce colours that are not accepted within the breed standard then claiming they are "Rare" so therefore must command a higher price. This is misleading for an unsuspecting buyer. Unfortunately if people looking to purchase a German Shepherd believe a "Rare" colour makes a puppy special as opposed to a standard colour these breeders will continue to disregard the German Shepherds breed standard of which breeders have for so many years been dedicated to uphold. The increasing numbers of German Shepherds with colours not accepted in the breed Standard is not a fault within the German Shepherd Dog breed but rather the aims of people that deliberately breed them.

We must remember all our wonderful German Shepherds whatever their colour deserve kind and caring and responsible owners.

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A full copy of the breed Standard can be seen at <https://www.thekennelclub.org.uk/breed-standards/pastoral/german-shepherd-dog/>