COLOR AND THE FRENCH BULLDOG BREED STANDARD

The Constitution of The French Bull Dog Club of America says: "The objects of the club shall be . . . to urge members and breeders to accept the standard of the breed as approved by the American Kennel Club as the only standard of excellence by which French Bulldogs shall be judged

Our Standard has included basically the same color requirements and disqualifications since they were added in 1911. During the intervening 97 years, it has listed the following as disqualifications: *solid black, black and white, black and tan, liver and mouse color.* In the FCI (Fédération Cynologique Internationale) Standard, the term "mouse grey" is used (*Mausgrau* in German, *gris souris* in French). Since our color disqualifications were added the same year that a Conference of French Bull Dog Clubs of Europe, at which our club participated, developed the European countries' standard, it is clear that the "mouse" in the US Standard referred to the mouse-grey coat color shown by dogs expressing the recessive "blue dilution" (D/d) gene.

The genetics of canine coat color is complicated because there are several genetic loci involved, some of which control the color and intensity of the pigments, and some of which control the pattern of distribution of these colors.

Briefly, there are two types of pigment in dogs— a **light** pigment (phaeomelanin) which may range from reddish through yellow to pale cream; and a **dark** pigment (eumelanin) which is either black or brown. French bulldogs should carry only the gene for the black type of dark pigment and therefore should have only black noses, lips and paw pads. Brown pigment in the coat or nose/lips/pads is unacceptable (and is the "liver" that our Standard deems a disqualification; it is also a DQ by the FCI standard). The light pigment gives rise to a range of fawn coat colors — all phaeomelanin, but in various degrees of concentration to produce the range of pigmentation from red through fawn to cream. Some fawn Frenchies have a black mask, which is a recognized and acceptable coat.

There is a "pattern" genetic locus that gives rise to brindle coats. Brindle Frenchies have a base coat of fawn hairs through which black hairs extend in bands to produce a coat ranging from a "tiger" brindle in which the fawn hairs predominate, to the more common dark brindles in which the black hairs predominate. In some of the latter, the black hairs are so numerous that there may be only a small number of fawn hairs arranged in one or more bands. Our standard refers to "a trace of brindle," which should have enough fawn hairs to demonstrate this pattern. There is no such thing as a "brindle hair" since brindle is a pattern consisting of a mixture of black hairs and fawn hairs.

Another 'pattern" gene produces pied (piebald) in which the coat is white with

pigmented patches most commonly located on the head, tail base, and "saddle". The pigmented patches may be either fawn or brindle, but in a brindle pied dog there must be enough fawn hairs visible in at least one of the pigmented patches to provide the brindle pattern, so that it is not the disqualified "white with black."

Another pattern gene gives rise to black-and-tan (black with tan points), also a disqualification in both the US and the FCI standard. While there have been some black and tan Frenchies, these are rarely seen.

The color that has become more widespread in recent years, and which some are promoting as "rare," is the "blue" coloration caused by the recessive gene called "Blue Dilution" (D/d). This gene can act on both the dark (black or brown) and light (red to yellow) pigments.

In a brindle or a brindle pied dog, what should be black hairs (as well as black pigment on the nose, and paws) is a slatey blue-grey color. In a fawn or fawn pied (white with fawn markings) dog, the fawn hairs are a silvery fawn and the nose, the dark mask (if there is one) and paw pads are slatey blue-grey. Any French Bulldog that has mouse colored hair - whether on a brindle or a fawn dog - should be disqualified as mouse. The coat color constitutes a disqualification - as does the nose color.

Although some people find blue Frenchies attractive, neither they nor their offspring should be sold for show or for breeding, as they all carry a disqualifying genetic fault. If a blue dog (d/d, with two copies of the recessive "blue gene") is bred to another blue (d/d), all of the resulting puppies will also be blue (d/d). If a blue dog (d/d) is bred to a non-blue who is NOT a carrier of the blue gene (D/D), ALL of the puppies will be carriers of, but will not express, the blue gene (D/d). If a carrier of the blue gene (D/d), is bred to a non-carrier (D/D), 1/2 of the puppies will be normal non-carriers (D/D) and 1/2 will be carriers (D/d). If two carriers are bred together (D/d X D/d), 1/4 of the puppies will be blue (d/d), 1/2 will be carriers (D/d), and 1/4 will be normal non-carriers (D/D).

Some people mistakenly believe that even though a dog may have a blue dog in its ancestry, that if no blues have been produced in several generations that means that their dog can't be carrying the blue gene. This is wrong. It is not like mixing paint in a bucket, progressively diluting out the undesirable gene. A recessive gene will keep passing hidden and unchanged through an infinite number of generations of carriers. The insidious thing about a recessive gene is that carriers pass the gene on to about 1/2 of their offspring, producing another generation of carriers; then those carriers pass it on to 1/2 of their offspring, and so forth, so that the gene spreads unnoticed through the gene pool as people unaware of an affected ancestor breed its descendents. It will only surface when a carrier is bred to another carrier (or to a blue), which happens when people do

linebreeding. This is one of the beneficial things about linebreeding; it exposes the presence of undesirable recessive genes in a line, so that responsible breeders can undertake to eliminate them.