

CHAPTER 2

UNDERSTANDING SOME BASIC GENETICS

Anyone taking a really good look at the different varieties of German Shepherds in this country will easily be able to distinguish the very small, spooky type of dogs from the very large heavy boned, plush coated type. These two different lines go back in their heritage to their original roots in Germany. Therefore, crossing these two different varieties back and forth among themselves has created a lot of variation within the breed, with a lot of different recessives.

It is my observation that a specific type can be created in four generations, but the recessives will still carry through into the twelfth and fourteenth generations. Therefore, it is easy to understand how the recessives that you have picked up from all of these different gene pools, have been incorporated into this one particular breed. It is very unusual to find a German Shepherd litter of puppies that are identical, or that grow up to look identical as adults. Usually they do not resemble each other. For example, it is very common to find (in a litter with eight puppies) two that are black and tan and stocky, two that are sable, tall and leggy, very close coated, another plush coated, one with medium body type and a very low croup, one may have a short or curled tail, etc. They will range in color, size and body structure. When they have reached maturity, and have been brought together as a group, many people will have a very difficult time accepting the fact that these all came from the same parents.

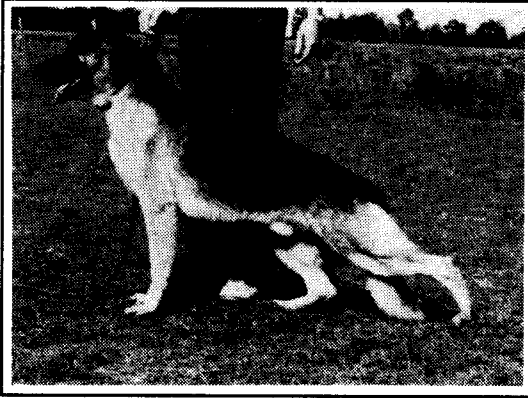
On a questionnaire presented to the German Shepherd breeders, by the German Shepherd Dog Club of America, Inc., some of these questions appeared that were to be answered; none, few, some, many, or most. The questions were sound character, strong temperament, shy-fearful, alert personality, vitality, intelligence, rich, adequate or light pigment, strong, weak or hanging ears, long-arched or short necks, correct or overshot bite, dark or light eyes, extreme forequarter, extreme rearquarter angulation, compact feet and strong pasterns, sound movement coming and going, level strong, roach or saggy backs, low tail set, short croup and high tail set, short, coupled, ring, hook or saber tails, longer or shorter legs, plush, short, long, wiry or curly coat, liver or blues, cryptorchidism or monorchidism, heart murmurs, disease of spinal cord, epilepsy, esophageal achalasia, gastric bidilition-tortion, high, moderate, low or no panosteitis, un-united anconeal process, hip dysplasia, hypo-thyroidism, pancreitis, etc. etc etc. These were the questions the breeders were to answer regarding each specific puppy in a litter!!

I have seen several questionnaires filled out for a specific litter, and the variety of combinations within the litter are just astronomical. Each dog in your program could carry the following recessives; black, white, long coat, overbite, curl tail, soft ear, roached back, hip dysplasia, epilepsy, monorchidism, heart murmur, spinal cord malfunction, etc. etc.

Even though you have a dog that appears to be one thing, that dog can produce puppies that not only do not resemble him, but will surprise the heck out of you, because they will be coming from what we call his "shadow dog." The dog you see is the dominant factor, the dog you do not see is the recessive factor. The only way to know what your "shadow dog" is, (the unseen part of your dog) would be to study its ancestry, littermates from his particular litter, littermates from the parents, grandparents and great-grandparents, and so forth and so on.

This, and this process alone, will create a complete picture so that you can understand the specific dog that you are dealing with. Without doing this, there is absolutely no way that you can be assured of what type of progeny your puppies are going to produce, and so forth and so on.

I strongly encourage you to study my article on Practical Genetics, and hopefully it will give you some idea of the complexity involved when dealing with various gene pools within a particular breed of dog.



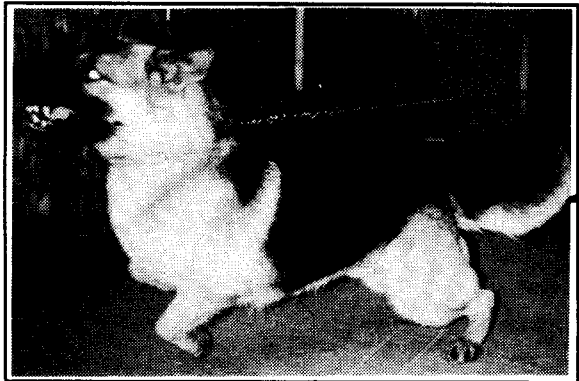
AN AMERICAN SHOW DOG (CISCO OF PURPLE SAGE) FROM THE LATE 70'S

It would be very easy for anyone to bring in a dozen or more A.K.C. registered German Shepherd dogs that look so different from each other, that you would have to be really very gullible to accept the fact that they are pure A.K.C. registered offspring of one breed. The reason for this dilemma is very simple.

A) The German Shepherd Dog was developed from a genetic pool of various breeds ranging in size from that of the Border Collie, to the Great Pyrenees.

B) The German Shepherd Dog also has a genetic pool for temperament and intelligence ranging from the Wolf to the Spitz.

C) Various fanciers in various places preferred various qualities, and bred to suit their taste. Most of them creating their personal version of the American, Canadian, English etc... German Shepherd Dog.



A GERMAN IMPORT - READY TO KILL ANYTHING THAT MOVES!!

The Shiloh Shepherd draws its strength and intelligence mainly from the large "FLOCK GUARDIANS" gene pools. Through years and years and years of breeding these lines back and forth-holding back only the BEST specimens, and carefully line breeding them back and forth again and again, was it possible to "pull out" these hidden recessives and then "lock them in" to bring forth the magnificent Shilohs!

These dogs did not come about by "accident", HUNDREDS OF LITTERS HAD TO BE BORN AND THOUSANDS of puppies were tested, using various combinations of American and German lines. Only the best possible offspring were retained, to be used for future breedings. A very complex LMX (Littermate-Information) system was designed to weed out any inferior recessive genes. This later proved to be of IMMENSE value in helping breeders to better understand the TOTAL "GENETIC MAKEUP" (BLUEPRINT) of their stock. Specially designed-detailed pedigrees, using the latest computer technology can be obtained through the ISSR.