**ESSENTIAL ELEMENTS**

by SANDRA MURRAY

**Question:** How many breeds of dogs still have representatives of their breed in its original form in their country of origin and that still perform their historical work? **Answer:** Pitifully few! Two World Wars, civil wars and armed insurrections during the 20th and 21st centuries have decimated working canine populations in many parts of the world. Even in those areas that have escaped the ravages of war, a burgeoning world population coupled with improved communication and transportation systems beginning in the second half of the 20th century, and continuing now at an ever greater rate in the 21st, has rendered most working canines obsolete.

In a few isolated areas of the Congo Basin, however, one can still find remote jungle villages with tribes that even today depend upon their Basenji dogs to help fill the dinner pot. These villages—for the moment—remain so isolated that their populations of Basenjis have not been exposed to any other dogs, either regional or foreign. It was from just such villages that intrepid Basenji breeders from the US have searched out dogs to bring back to the States.

**ENLARGING THE BASENJI GENETIC POOL**

The genetic pool for Basenjis in the U.S. was never very large, being based mainly on dogs imported from the “Of the Congo” kennel in England. In any purebred breeding program—whether it is of dogs, horses, sheep, cattle or pigs—the intense line breeding necessary to set desired characteristics will allow symptoms of harmful genetic diseases to emerge in the animals. In Basenjis, some genetic diseases did appear and spread throughout the gene pool. Of those diseases the most worrisome were Fanconi Syndrome (progressive kidney disease) and Pyruvate Kinase Deficiency (impaired red blood cells resulting in anemia and other blood related issues). What were breeders to do? In the words of the late, great Dr. George Padgett, “Dilute, dilute, dilute!” Dr. Padgett proved again and again his willingness to guide dog breeders through just such dangerous waters, and he warned against “throwing the baby out with the bath water”. Why lose valuable breeding stock when breeders could use carriers of a disease on outcrosses free of the disease, thus diluting the genetic anomaly enough to prevent producing an affected animal?

Dilute the harmful genes is exactly what Basenji breeders did in bringing back native African dogs, beginning in the late 1980s, to breed to domestic Basenjis. Because the key to managing health issues is maintaining the genetic diversity of the breeding dogs, introducing native stock became the solution. One might well ask if these African dogs didn’t carry harmful genes, too, and the answer would be yes. Studies have proven that every living mammal carries the potential in its DNA for at least five genetic diseases.

**AFTER AFRICA**

Reprinted with permission from *ShowSight Magazine*
BUT... the Basenjis in Africa breed randomly with no human control or intervention, and for these dogs, just surviving despite minimal or no human care is an achievement. In the Congo natural selection functions forcefully and efficiently on those native dogs so that very few dogs with genetic diseases can survive long enough to pass such harmful genes on to a future generation.

For nearly 30 years now, native Basenjis have been brought into the US to reinvigorate domestic breeding programs. What has been their effect? What differences exist between the African and the domestic Basenjis? Have these dogs made a lasting impact on the breed, or have their contributions been totally absorbed now by the greater numbers of domestic dogs? I interviewed several well-known Basenji breeders who have imported and/or used African stock in order to find answers to those questions.

First of all, the importations have proven a resounding success in providing a breeding group free of both Pyruvate Kinase Deficiency and Fanconi Syndrome. As Jon Curby (one of the first importers and current president of the Basenji Club of America) relates, “There were health concerns with the new imports since we had no way to test for the few genetic problems in the breed inside Africa until the dogs were in this country and one of those diseases could not be diagnosed until the dog was several years old. As it happened, the problem [Pyruvate Kinase Deficiency] that had a genetic test was not carried by any of the new imports and over time most agreed that the other problem, Fanconi Syndrome, was not carried either. Since 2007 we have had a DNA test for Fanconi and it confirmed that none of the recent imports carried the gene.”

Pam Geoffroy of Eldorado Basenjis lists another benefit of the infusion of African genes, “Just on the basis of health, we felt that we had made a good move to the African imports. Because of the level of health obtained, we were able to go back and line breed to our foundation stock.”

Now breeders had both the genetic markers as well as a group of healthy African dogs to use as effective weapons to eliminate the two lethal diseases from the Basenji breed. Although a few diehards failed to acknowledge the benefits of introducing the African dogs, time has shown that the importations did exactly what they were intended to do.

PHENOTYPE OF THE AFRICAN IMPORTS

An unwritten agreement among those using the African stock and their descendants dictates that these dogs carry the same prefix on their registered names no matter who the breeder or owner. This prefix denotes the area in the Congo Basin from which the dog originated. The importation groups are Avongara (the most numerous), Lukuru (3 individuals registered), Ntomba (2 individuals registered). Basenjis carrying such a prefix are 100% breeding from the African stock containing no dilution from either other import groups or from domestic stock. No matter how many generations away from the original African stock, everyone knows that such dogs descend from an African import.

Certainly, people expected to see some differences in the appearance, or phenotype, of the African Basenjis. The imports did not disappoint, for there were indeed differences from domestic stock and among the Africans themselves—not huge differences, but discernible ones. Pam Geoffroy and Sheila Lund of Eldorado Basenjis have used African dogs extensively and successfully in their breeding program. Pam observes that, “The African imports actually, but not surprisingly, were not of one particular look or build. Some were well proportioned and some were long bodied. Generally, their tails were not very curly. Some had nice heads, and some were not quite as typical... Not surprising, when bred together, import breed to import, the diversity increased.”

The accompanying photos were taken by Michael Work on the 1987-88 trips to what was then Zaire but is now the Democratic Republic of the Congo. The Basenjis pictured are typical of the dogs that US importers saw in the villages (see Figs. 1-3).

Dr. Jo Thompson has lived with native African Basenjis for over 2 decades during her work in the Democratic Republic of the Congo studying Bonobo apes. She imported three of these African Basenjis from the Lukuru region of the Congo. As a reminder of what a unique situation exists for Basenji fanciers, she explains, “…our Standard was never about something to be created but it was always a visionary description of a unique, nature-made breed already in existence. This unique breed type was well recognized as a geographically distinct breed previously called the ‘Congo Terrier.’ It was and is truly a breed of antiquity.”

The villages from which Jo obtained her African stock have so far remained isolated from dogs outside of their area and have no history of Western/European dog contact. Jo adds, “…based on DNA analysis of samples collected in these villages, earlier this year I was informed that these dogs provide
evidence that they are from a population that has been in the Congo Basin without introgression from the outside for more than 2,000 years." Can’t get more “pure in the strain” than that!

The more rectangular body proportion of many of the African dogs does reflect the general structure of a group of dogs present in many parts of the world known as “pariah dogs”. The word “pariah” comes from India and carries a negative connotation in common speech, but in strictly canine terms, these dogs live on the periphery of society—in it but not necessarily of it. They are not cared for in the sense that dogs in the Western world are, but often share a symbiotic existence with humans. Pariah dogs come in an assortment of colors, but shades of reddish tan predominate in breeds such as the Carolina Singing Dog, the Australian Dingo, the New Guinea Singing Dog—and the Basenji.

In addition to a differing proportion from that of the domestic Basenjis, the African dogs usually carry a bit more substance to the head (especially, the males) with the needed stronger underjaw. Their coats differed from domestic dogs also. Dr. Jo Thompson observed that, “Based entirely on my own native dogs and their progeny, my native stock have short coats, giving the appearance of being painted-on, with no undercoat. The hairs are like a soft brush; just stiff enough to give some protection when moving through the forest understory, keep dirt from clinging, and repelling light rain or morning dew, yet yielding enough to give a uniform texture and the illusion of being soft. Some domestic lines have lost that painted on illusion and, whether from generations of climate adaptation or not, have undercoats and longer fur.”

Another breeder who has used African imports in her breeding program, Victoria Miller, has observed that, “Looking at photos of the original Basenji imports (1940s), I see a lot of similarities between them and the newer native stock.” Those similarities arise from a consistency in necessary hunting skills, with the accompanying phenotype to perform them, and the continued isolation of the breeding stock to ensure similarity of type. Hence, the African dogs of the 20s, 30s and 40s will still strongly resemble the imports of the 80s, 90s and 2000s.

The ears on the African dogs vary as well and in ways that can affect the amount of wrinkling on the head of a Basenji. As Thompson describes, “The native Basenji ears are erect, deeply cupped for optimum sound reception in dense forest vegetation and comparatively smaller than typical hound ears. The native ears are wide at the base, with the sides of the ears curve forward while the tip is forward of the base to give a slightly hooded appearance. Moderate ear size anchored in pliant skin is important to give more flexibility of motion and to contribute to wider hearing range. Taking the Standard literally and to extreme, domestics have been bred for small, close, high-set

ears that are rigid in place. That tendency links to a loss of the very important deep hooding of the ears and wrinkling in the adult head.”

Of course, there are breeders who would disagree with Thompson’s assertions by pointing to the breed standard which calls for a small ear. However, the complaint that the breed is losing its head wrinkles is a common one that I have heard from many Basenji breeders. I have not heard breeders suggest a cause for this. Perhaps, the Africans’ ear construction is a benefit that could be used judiciously to improve ear mobility with its accompanying head wrinkling.

The genetic diversity brought in by the African dogs proved a true blessing, but they also have contributed positive structural elements. Jon Curby explains that one of the benefits “is the more nearly proper fronts of the native dogs—longer upper arms placed well under their bodies... Luckily, some breeders have been able to keep the better front structure over several generations and the less desirable long bodies and loose tail curls can be gone in one or two generations.”

Curby provided some photos of the African imports and their first generation offspring that reveal the improved structure and movement of the native stock.

Pam Geoffroy adds that, “Some of the Africans possessed really strong front assemblies. We had two good foundation bitches that could use some improvement in front structure but were of sufficient type to help correct some of the weaknesses often seen in the African crosses such as longer bodies. We did get really long, beautiful strides, and the fronts were there. Not all the pups were worthy of going on with, but we chose the ones who gained what we were looking for... and now not a single dog in our kennel is without new foundation stock in their background.”

The BCOA provides a special African Stock Exhibition during their National Specialty for the imports and their offspring. AKC allows it as a “Special Attraction”. Such a venue provides not only a showcase for the African-bred dogs, but also a way for Basenji fanciers to gauge which native traits are worth maintaining and which should be selectively removed from breeding stock. On another level, the Exhibition provides a simply delightful way of viewing the ways in which the African traits appear and persevere in cross breeding—including those improved front assemblies.

Other winners at the African Stock Exhibition that carried a high percentage of African breeding were Ch. Akuba’s Tiger Lily, a half-African who won Best Adult 3 times; SkyHi’s Power Outage was best adult in 2003; full African,

African stock breeder, Donna Lubbe adds, "The most significant benefit that the Africans have brought to my breeding program has been an improvement of movement. This has come about by the lengthening of the upper arm and lengthening of the second thigh which gives a strong rear drive." She also appreciates the essential correct feet and well-arched toes that the Africans have reintroduced into the breed.

Perhaps because of that superior front assembly on the African imports, their infusion into the Basenji gene pool has had a positive influence on the performance competitions. Jon Corby elaborates: "The top agility Basenjis have a substantial percentage of new native genes. In lure coursing a half native bitch won the National specialty lure trial in 2012 and an imported native bitch won in 2013. The son of the imported National winner won the AKC National lure coursing championship last year." It should also be noted that the African imports brought with them more substance and bone to the bodies of their offspring. Natural selection in Africa had dictated this type of body to perform successfully in their hard scrabble lives, which means that the imported dogs might, "restore many breed-characteristic traits that had been lost", suggests Thompson.

Breeder, Katie Campbell added, "What I do notice is a significant difference in bone weight. My new Africans and the first and second generation out of them have the same visual appearance of substance, but if you lift them, there is a marked difference: The new African stock is heavier. It's not too heavy, nor coarse, but it just weighs more than their domestic counterparts. And breeder, Victoria Miller swears that, "The native and half-Africans are definitely more fit for function. They have more natural energy."

Improved front assembly and movement on the African dogs should not surprise anyone. As importer of the Lukuru dogs, Dr. Jo Thompson reminds us that the African Basenjis succeeded as “efficient hunters in dense jungle vegetation” with no mercy for failure. That meant that “the Congo dogs were not as “fancy”, as Katie Campbell explained, “but they had many advantages genetically.”

As mentioned earlier, many of the African dogs were longer in body which actually has benefits and is not a problem unless that length is in the loin. The lesser amount of curl to their tails would have been of no concern to their African owners, as it did not detract at all from their hunting ability. A totally new and novel ingredient that Congolese dogs introduced to the U.S. gene pool was a different color—brindle. Jon Curby reports that about a third of the dogs in the Avongara region were brindle, so it was obviously an original color within the native gene pool. As Jon relates, “Breeders have been aware that the [brindle] color was indigenous in Africa for over sixty years, but since it is a dominant pattern, and the British rejected the only early native brindle dog, it did not exist in this country until the 1987-88 imports were registered in 1991.” With the acceptance by the BCOA of the brindle dogs, AKC did as well with the registration of the imports.

Of course, the African dogs did not bring in only good health genes. Nature doesn’t work that way. Some of the imports have shown a propensity...
for food allergies. Other autoimmune issues have appeared, often associated with thyroid problems. Careful selection of breeding stock that has tested normal for a healthy thyroid function should help eliminate these issues. Anecdotal evidence of hip dysplasia in a few of the imports exists, but most of the Africans have hips that have cleared OFA testing.

**TEMPERAMENT DIFFERENCES IN AFRICAN IMPORTS AND THEIR OFFSPRING**

For Basenji breeders incorporating the African-bred dogs into their breeding programs, observing the differences in temperament between their domestic stock and the imports proved fascinating. In researching many breeders’ experiences, what the African dogs seem to have brought to the breed in the US include an increased intelligence (cognitive ability) and a more biddable nature, making them easier to live with, plus they are great pack leaders. They have quite an affectionate nature. Dr. Jo Thompson describes her import, Mopaya: “Given the choice between food and being in my lap, she always chose to be in contact with me. That was incredible.”

Thompson notes that, “I was well aware that there was a pervasive opinion across the fancy that the aloof personality desired in the breed was part and parcel of short, testy temperament. And so it was tolerated / accepted in breeding. But that was not the breed that I knew so well in their natural setting… They have an extremely high degree of ability to read humans and each other.”

Seattle Basenji breeder, Katie Campbell, describes the temperament of her African import bitch, Naziki: “She was totally adaptable to other dogs in my household and to children and adults she has met in all surroundings.”

This more biddable nature does not necessarily make for a good show temperament, however. As Pam Geoffroy notes, “With some exceptions, these first generation crosses didn’t have the show attitude we usually expected with domestic Basenjis… there are still no imported dogs or those bred strictly from them that have won a conformation title and the number of first generation crosses with conformation titles is still not very large… the highest percentage of new foundation stock Basenjis thus far to obtain a conformation title are our 78% Ch Eldorado’s Questionable Lady and 75% Ch Akuba’s Seeks Gold at Eldorado.”

**COMPARISONS IN PUPPY DEVELOPMENT**

Even how the puppies develop, both physically and mentally, differs between the African and the domestic-bred litters. Donne Lubbe documented the development of her litters in an article available on the BCOA African Stock Project website. Lubbe had 3 litters born within a few days of each other. The first litter was full African, the second one was 3/8 African and the third litter was only 1/16 African—nearly a completely domestic litter. Her full African litter arrived first, followed three days later by the 3/8 litter and one week later for the 1/16 litter.

The first glaring difference in the litters was that the full African pups “were up on their feet and attempting to walk at 2 days of age. Not just trying to stand, but walking. It took the other 2 litters 5 to 7 days before they made (an) attempt.” Lubbe noted this early developmental trend repeated with the African pups in eyes opening, exploring, weaning, etc.: “...the greater the percentage of African blood, the faster the puppies developed overall.” Their
cars, on the other hand, took much longer to become upright—sometimes over 3 months.

Even play differed between the African pups and the more domestic-bred ones. Wrote Lubbe, “The full Africans played…quieter and mostly in groups while the domestic pups played one on one and the play was vigorous and noisy.” However, the African pups began yodeling at 4 to 5 weeks and continued to be quite vocal. They relieved themselves in one area of the pen, well away from where they sleep. The African puppies also exhibited an especially sensitive awareness of their environment, sensitive to new sounds and smells and were alert to any and all changes.

Katie Campbell, longtime Basenji breeder who accompanied Jon Curby and Michael Work on a 2011 trip to Africa, also has recorded her experience with a litter from her imported Avongara bitch, Naziki. Naziki whelped a litter of 5, conceived via frozen semen from one of Katie’s deceased champion stud dogs. Said Campbell of Naziki, “She was the best mother that I have ever had in the over 20 years of breeding. (She was) very attentive and caring throughout the process. She’d watch them make a mistake and then would teach them.” Similar to Lubbe’s experience, Campbell’s half-African puppies gained weight faster, were up on their feet sooner, opened their eyes earlier and have always been very food-driven.

“The half-African puppies were more attentive to the environment and their mother’s relationship with me than any litter I have had,” added Campbell. Interestingly, the half-African litter clearly feared heights and took weeks longer than the domestic pups to feel comfortable stacking on the grooming table.

Proving the worth of African-bred dogs in the performance arena, one of Naziki’s sons, FC Taji’s hAfrican Chief SC (50% African) became the first Basenji to win Best in Field at an AKC SC (50% African) became the first Basenji to win Best in Field at an AKC. This son of Monroe and carries 23% African stock. He has earned his place as a top producing sire. Note the perfect footfall. His front foot has left the ground at the right moment for the hind foot to fall in that exact place. The African stock had a definite impact on improving gait in Basenjis. (Photo by Terri Kieffer-Key4prints)

...WITH CARE AND PATIENCE, ONE CAN TAKE THE NEW STOCK AND WEAVE IT WITH DOMESTIC STOCK TO PRODUCE VERY TYPICAL BASENJIS...

The African imports did bring some behavior issues with them into the US gene pool, however. Pam Geoffroy explains, “Breeding from the imports, we discovered that the temperaments did not always breed true. Even breeding confident imports with confident domestics didn’t necessarily produce confident offspring. The part-Africans often needed extra socialization. They were not always comfortable in the busy, noisy dog show environment. On the plus side, these crosses often made very good pets in that they tended to have more desire to please than the domestic Basenjis.”

Just as with all dedicated breeders, Pam and Sheila have persevered and learned through experience how to deal with the balancing act of maintaining the desirable qualities while diminishing the undesirable ones. As Pam states, “In our lines the structural gains have remained dominant, but, unfortunately, the temperament problems do pop up. We think the temperament problems have moved away
from the less confident, not so showy dogs and then it pops up again several generations down. We have worked hard to get that confident, showy attitude back without losing the gains made in conformation and movement. We are starting now to see more consistency across the litters. We are looking forward to carrying on with our newest generation.”

EXAMPLES OF AFRICAN CROSSES WITH DOMESTIC STOCK

Since 1990, there have been 8 different importations of 35 African Basenjis registered with the AKC. Along with the importations from Africa in the late 1980s, there is a genetic pool now exists that is high in diversity and with plenty of possible breeding combinations for breeders to achieve a workmanlike breed with robust health, agility and good movement. The dogs in the accompanying photos illustrate those possibilities.

In the Eldorado kennel’s experience, the top winners and producers have emerged from the dogs carrying 40% to 25% of African stock influence. These breeders used their Ch Eldorado’s Adonis on their champion bitch, Hocus Pocus and struck gold!

The 25% of African stock in Adonis crossed with the 56% in Hocus Pocus resulted in a champion bitch carrying over 40% import heritage and 60% domestic lines. This was Ch Eldorado’s Ooh La La, aka Monroe and she proved to be a super producer. Monroe whelped 4 all-champion litters for a total of 21 champion offspring, including Best in Show winners in the USA and Europe. She also produced the number one brood bitch in the history of the breed.

Monroe’s daughter, Judy, aka Ch Eldorado’s Akuaba With One Look JC, became that history making top producing brood bitch. Judy became the dam of 26 champion offspring, including Best in Show winners in the USA and Europe. She also produced the number one brood bitch in the history of the breed.

Some Basenji breeders see no purpose to maintaining this pool of pure-in-the-strain native stock, but I have seen in other species of domesticated livestock how important it can be to have an outcross group available for breeding. As with the Quarter Horse example, the need can be a crucial conformational issue. In Basenjis and more recently, Soft-coated Wheaten, the need can be the dilution of harm-
ful genetic mutations that cause disease. The need can also be simply the gradual loss of characteristics that define breed type, such as dogs missing the correct head wrinkling in some domestic Basenjis. For all of these issues, a judicious inclusion of native stock can restore the breed to its desired health and type.

A major proviso for such preservation programs is to maintain genetic diversity. Without great care, the preservation population becomes too related to each other. Additions of fresh native stock help to increase the gene pool—another case for further African importations. Monitoring the genetic breeding coefficient between mated pairs of dogs to maintain as much genetic variety as possible helps, too. In Basenjis, mixing the Avongara native stock with those from Lukuru should help broaden the genetic base.

ACHIEVING CONSISTENCY OF TYPE

I think that the secret to success for any of the Basenji breeders who have done well with incorporating the new African foundation stock belongs to those willing to practice all of the skills of a master breeder which include persistence and patience. Just one or two crosses into the African gene pool and then going right back to domestic lines misses the mark and defeats the gains of importing the African stock. Especially now that there is a genetic marker for Fanconi, breeders may be tempted to dismiss the African contributions and lose many of the other essential elements that the Africans offer, such as correct front assemblies, improved gait, good underjaw and correct ear structure with its accompanying head wrinkles. To maintain these qualities demands a healthy dose of African-bred stock on a regular basis.

Pam and Sheila are just now beginning to see the consistency of type across their litters after years of trial and error and hard work. The accompanying trio of photos testifies to what can be accomplished with long term, careful use of African stock.

There is still a very formidable segment of the fancy who do not want post-1990 native stock blood introduced into the breed. That seems quite short sighted to me. Any geneticist will advise breeders to seek out as much diversity as possible in order to maintain genetic health—which includes reproductive health, too, by the way. Attempts to curtail additional diversity in a breed will cause long term damage that will come back around to bite breeders in the behind and harm the breed.

That isolated villages still exist in the Congo with their pure-in-the-strain populations of Basenjis intact is nothing short of miraculous! Such places are doomed to become exposed to outside peoples and their non-Basenji dogs sometime in this century. The window of opportunity is closing fast. Until such time, whenever the political situation is safe enough to extract more good qualities demands a healthy dose of African-bred stock on a regular basis. The need can also be simply the gradual loss of characteristics that define breed type, such as dogs missing the correct head wrinkling in some domestic Basenjis. For all of these issues, a judicious inclusion of native stock can restore the breed to its desired health and type.

I think that the secret to success for any of the Basenji breeders who have done well with incorporating the new African foundation stock belongs to those willing to practice all of the skills of a master breeder which include persistence and patience. Just one or two crosses into the African gene pool and then going right back to domestic lines misses the mark and defeats the gains of importing the African stock. Especially now that there is a genetic marker for Fanconi, breeders may be tempted to dismiss the African contributions and lose many of the other essential elements that the Africans offer, such as correct front assemblies, improved gait, good underjaw and correct ear structure with its accompanying head wrinkles. To maintain these qualities demands a healthy dose of African-bred stock on a regular basis.

As long as breeders such as those prevail, Basenjis will remain in good hands.

Note: Basenji breeders have been unstintingly generous in their time and in their contributions to this article. Their commitment to their breed and to sharing their knowledge with me is truly impressive—my deepest thanks to each one of them.

Until next time,
Sandra
horns@hounds@gmail.com

RESOURCES:
6. Timing is Everything and Chance of a Lifetime for This Longtime Basenji Breeder, Ranny Green

“IT THINK THAT THE SECRET TO SUCCESS FOR ANY OF THE BASENJI BREEDERS WHO HAVE DONE WELL WITH INCORPORATING THE NEW AFRICAN FOUNDATION STOCK BELONGS TO THOSE WILLING TO PRACTICE ALL OF THE SKILLS OF A MASTER BREEDER WHICH INCLUDE PERSISTENCE AND PATIENCE.”