

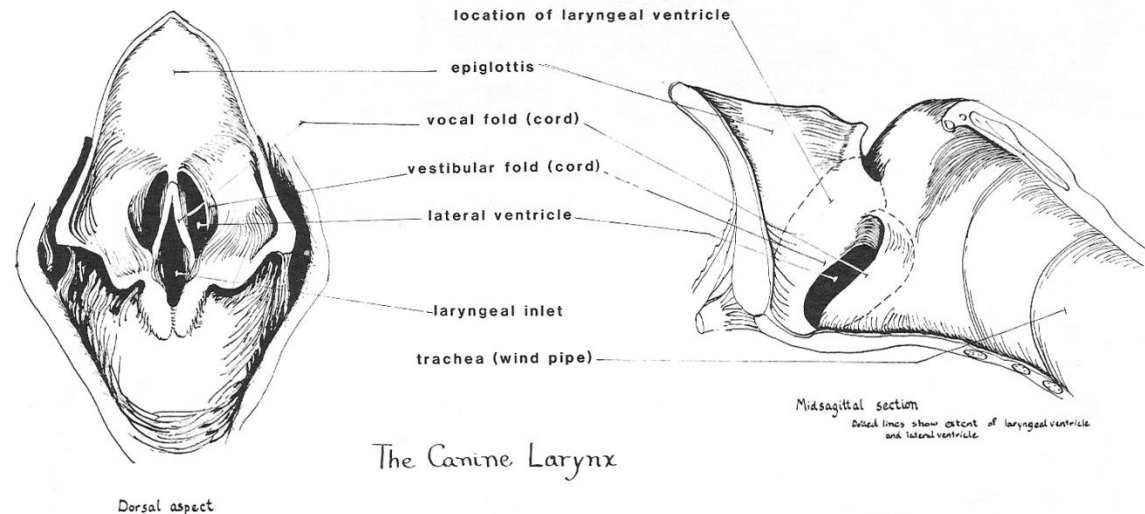
The Question of the Barkless Characteristic

This has been a question for Basenji fanciers for a very long time. Here are some articles from *The Basenji* in 1983 discussing the question.

First the reproduction to the right of a poster made by Elizabeth White appeared.

Although he does not bark
The Basenji is not silent
Making sounds ranging from
A yodel
to
A howl
to
A child-like scream!

WHY ARE BASENJIS BARKLESS?



The Basenji's voice-box (larynx) has all the features of the canine larynx. In the Basenji, the laryngeal ventricle, which is located between the vocal and vestibular folds, is shallow compared to other domestic dogs. The shallow laryngeal ventricle apparently limits the movement of the vocalcords. This is the probable cause of barklessness in Basenjis.

This article was originally in poster form for an educational "Leaning Experience". The poster was prepared by Elizabeth White.

"We have examined the larynx of the Basenji and compared it with a normal dog and also a cow. The vocal folds and muscles do not appear different. The ventricle has a position as usual except that it is very shallow. This prevents the vocal fold from being free on its lateral side. Apparently, this limits the vibrations of the vocal fold." Based on their finds, the Basenji does not bark due to a physical structure that differs from other dogs.

from BASENJIS, THE BARKLESS DOGS OF CENTRAL AFRICA by Veronica Tudor-Williams

Next this article with a different opinion appeared:

The Basenji February 1983 page 9

Why Don't Basenjis Bark: Another Opinion

Jon Coe

Perhaps this question has been asked for as long as Basenjis have been compared to other dogs. The usual response is that they just can't. Much less often someone suggest that they could but just won't or don't. Anatomical research, such as that presented in the January issue of *The Basenji*¹ has been done to justify the first premise that basenjis can't bark. It is inconclusive. "...the vocal folds and muscles do not appear different." Only superficial differences were found in the ventricle. Although this may produce a slightly different sound of bark, I doubt that it could account for the differences in barking behavior between, say, a Basenjis and a beagle. Consideration of physiological equipment (vocal folds, etc.) cannot be separated from the study of behavior and motivation. For example, a debarked dog attempts to bark just as much a she did before being debarked.

In *Genetics and the Social Behavior of the Dog* (1965)², Scott and Fuller did a thorough study of barking behavior, comparing Basenjis, beagles, shelties, cockers and wirehaired fox terriers. The following quotes summarize their findings:

"Barklessness – One of the striking characteristics of the basenji breed is the fact that these dogs rarely bark. We can only speculate as to why this trait was developed, since it was already present in the breed when it was brought out of Africa. It is possible that barking, which is an alarm signal given by dogs whenever a strange animal or person approaches their home territories, is not conducive to survival in the African forests. Leopards are reputedly fond of dog meat, and it may be that the dog which barks simply attracts attention to himself and comes to an untimely end. Although travelers have described basenjis as being very noisy in their native African habitat, especially at night, none of the sounds produced are like barks, being variously described as

"crowing", "yodeling" and "howling". This suggests that the basenjis may have developed sounds with unusual acoustic qualities. The barking of most dogs, as analyzed on the sonograph, consists of a succession of short, sharp, monotonous sounds, which are very easy to localize. That is, barking conveys accurate information as to the location of the barking animal. On the other hand, sounds which vary in pitch, loudness, and duration are much more difficult to localize with respect to direction and distance, as anyone who has experience with the vocalizations of coyotes will recognize. While distinctly different from coyotes, the basenji sounds have similar qualities of variability and may serve the same adaptive and protective function. In any case, basenjis bark very little compared to other breeds of dogs and, whenever different breeds of dogs live together, the basenjis' relative silence is extremely noticeable. As a stranger walks by the dog runs at our laboratory, a chorus of barks arises from a group of cocker spaniels and from a nearby group of Shetland sheepdogs. In a pen between them a litter of basenjis look up without opening their mouths.

Darwin thought that wolves do not ordinarily bark and that when they do it is because they have learned the habit from dogs. All modern observers of wolves under any conditions, whether in zoos or in the remote wilderness, agree that they bark, although not as much as many dog breeds. The barklessness of basenjis is therefore not a primitive ancestral trait but rather a new and unusual characteristic, produced by some sort of selection.

Obviously, basenjis (or at least the strain which we have) are not completely barkless. When sufficiently excited, they will bark. Table 11.5 shows that basenjis

barked during 20 per cent of the opportunities given them during the dominance test, whereas the cocker spaniels barked during 68 per cent. The basenjis usually gave only one or two low “woofs” when they did bark, the average number being about two. At 11 weeks of age, the largest number of barks given by any basenjis during the dominance test was 20 and the next highest number was 12. More than this, the sound which the basenjis make has a different quality from that in other breeds. Thus there are three different aspects of what looks offhand to be a simple behavior trait. One is the threshold of stimulation – very high in the basenji and very low in the cocker spaniel. A second trait is the tendency to bark only a small number of times rather than to become excited and bark continuously as do many cocker spaniels. The maximum number of barks recorded for a cocker in a 10-minute period was 907, or more than 90 a minute.”

Through experimental breedings between Basenjis and cocker spaniels, Scott and Fuller determined that the trait of being easily stimulated to bark is probably controlled by a single dominant inherited gene. Their opinion seems to be that it is the high threshold of stimulation that makes Basenjis barkless. In other words, they can bark but don’t, at least not very often.

Now every new owner of a Basenji is in for a number of surprises. How many times has a new owner called to say, “Hey, that puppy just barked! I thought Basenjis weren’t supposed to bark.” The truth is they do have a warning call like all other canids. This is the “woof” Scott and Fuller mentioned. It is part of a startle reaction and can be heard in wolves, foxes and jackals which are all species that normally don’t bark. This leads me to speculate on another possibility. Perhaps Basenjis don’t bark simply because they never did!

The usual assumption is that the barking characteristic was established through selective breeding along with curling tails, droop ears, multiple colors and all the other features of physique and temperament that resulted in today’s breeds of dogs. This assumption then assumes that Basenjis descended from an early variety of barking dogs who then lost the bark due

to environmental selection against barking, such as predation by leopards. A problem with this theory is that leopards are not limited to Africa, the Basenjis’ ancestral home, but are found throughout the Near East and Asia as well. Leopards range from Afghanistan to Korea and Borneo to Lake Baykal. One assumes that dogs throughout this region have been preyed upon by leopards, but they still bark. Barking may attract a leopard but is also an excellent defense, especially when it summons help. Leopards are commonly treed by smaller barking dogs.

If, on the other hand, the Basenji breed derived from domestic ancestors so ancient that the barking character had not yet been selected for, then modern Basenjis would simply never have developed this trait at all.

There are number dog breeds that emerged before the advent of human writing or pictorial records and whose age is therefore speculative. Yet the fact that all of these breeds are very different from their wolf ancestors shows that great periods of time and many intermediate breeds separate them from wolves. Yet of these breeds, which include greyhounds, salukis, mastiffs and other dogs of antiquity, only Basenjis are confirmed to have an annual photoperiodic season for both dogs and bitches, as is found in wolves. Other primitive behaviors such as production of milk and maternal care by un-bred “aunts” and regurgitation of food for pups by males are occasionally found in Basenjis, but may also occur in other breeds.

The Basenji breed, which is similar to other primitive pariah breeds around the world³ certainly existed long before it was recorded in Egyptian tombs of four thousand years ago. Did it or its direct antecedents trace their origins to a time and place before dogs barked? Basenjis were hunting dogs of African pygmies, thought to be the oldest of all Africans, even older than the settlers of the Nile Valley. Perhaps Basenjis have been around much longer than anyone suspects.

¹ White, Elizabeth, 1983. “Why are Basenjis Barkless?”, *The Basenji* XIX:10 (Jan. '83)

² Scott, John P. and Fuller, John L., 1965. *Genetics and the Social Behavior of the Dog*, University of Chicago Press, Chicago, pp. 273-276

³ cf. Brisbin, I.L., Jr., 1977. “The Pariah”, *Pure-bred Dog American Kennel Club Gazette*, 94:22-29 (Jan. '77)

Finally this article appeared:

Further Comments on Basenji Barklessness

Veronica Tudor Williams

The Basenji June 1983 page 7

Ever since the Basenji made its spectacular appearance at Crufts there has been speculation as to why it does not bark. This speculation ranged from the fact that it could bark but chose not to due to a peculiar formation of the throat and also that through centuries of silent hunting it had lost the habit of barking. For many years these theories were rife in Britain, but there could be nothing certain without proof...The latest theory being that the Basenji just doesn't want to bark, which might be thought sensible when one hears all the dogs barking at shows, but to my mind is just a flight of fancy.

When Fula got to be 14 years old, I knew the right thing for me to do was to give her body for research as she might be the last pure-bred Basenji to come out of Africa (which has, in fact, so far proved to be the case).

In the end, right won, and after a battle with myself offered Fula's body after death to the Royal Veterinary College. I could not have been met with greater gratitude, consideration and kindness. I might have been offering them the crown jewels, and even Dr. Fienes, the Head Pathologist of the London Zoo asked to be present at the post mortem. The post mortem was conducted by the Head Anatomist of the Royal Veterinary College. Although about 14 years old, Fula was in wonderful health, so all plans were made well before her death. They all knew I thought the world of the little dog and it was not going to be easy.

When the time came my vet and friend of 25 years standing collected Fula's body from my house. The Veterinary College sent a car down to the vet's surgery. I had said that on

no account was she to be stuffed, but had given permission for her skeleton to be preserved for all time at the Veterinary College. Almost immediately I was thankful I had done it, we now had knowledge and information at our fingertips. Little Fula's skeleton is preserved for all time for anyone interested in veterinary matters to see, instead of being lost in dust and dashes and the knowledge gone forever.

Dr. R. R. Ashdown wrote an article on "The Larynx of the Basenjis Dog" for the *Small Animal Journal* which went all over the world. I actually saw the article first in the surgery of the famous Australian vet and judge in Sydney, N.S.W., Dr. Harry Spira.

Dr. Ashdown has been kind enough to give me permission to quote from the article. I will only include the paragraphs likely to be of interest to dog breeders and not the technical portions.

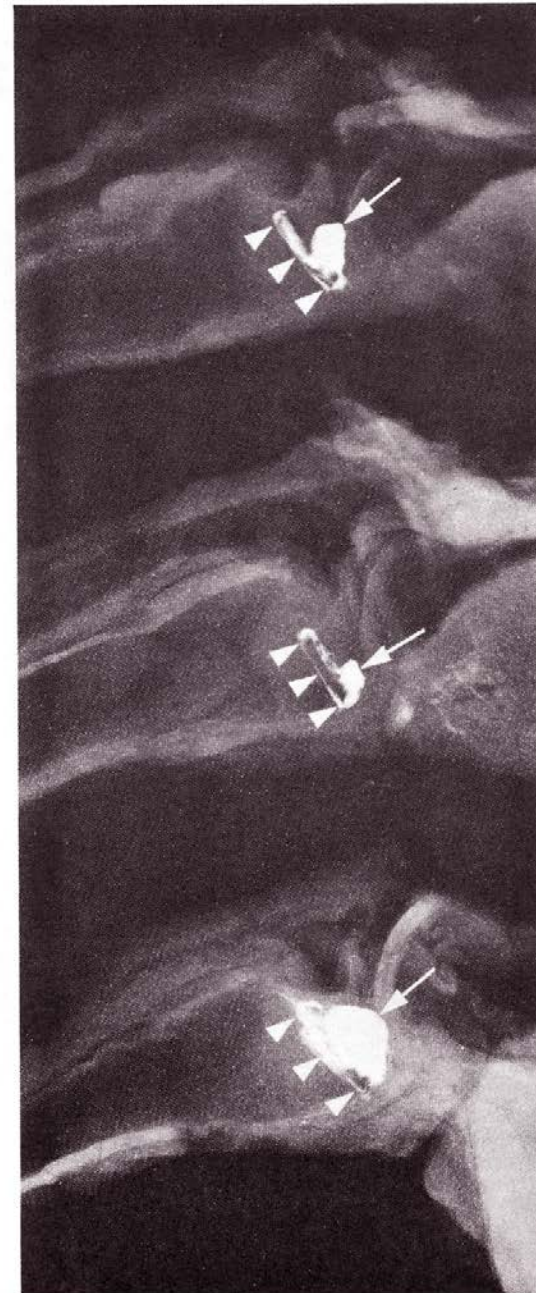
"The larynxes were removed, post mortem, from two Basenjies: B1 (Fula of the Congo, born in Central Africa) and a twelve-year-old female B2 (Ch. Fulafab of the Congo, Fula's grand-daughter) whom Mrs. Prestige was generous enough to donate shortly afterwards. Neither of these dogs had ever been known to bark. Similar material was prepared from 7 dogs of both sexes ranging from a Great Dane to mongrels. The surface features were studied with special attention to the vestibular and vocal folds, the laryngeal recess and two laryngeal saccule. Muscles, nerves and folds showed no striking difference in Basenjies. Right and left

laryngeal recesses and saccules were radio-graphed after filling with barium sulphate. In Basenji B2 the left and right laryngeal recesses were completely filled by thick folds of mucosa and were therefore markedly shallow and less extensive than those seen in the other dogs. In Basenji B1 the same was true, also a careful search failed to reveal any sign of a laryngeal sacculle leading from the right recess in B1, though in the left recess a small orifice was presented through which a blunted bristle could be introduced to a depth of 7 mm. In the comparable larynx of the other dogs the widths of the orifices were 16 and 17 mm respectively; similar values were obtained for the other dogs. In all of the “normal” dogs the saccules expanded dorsally to occupy a large space between the vestibular folds and the thyroid cartilages. In the Basenji larynxes, however, this was not so on either side and on the radiographs of the 2 Basenjies and 1 Fox Terrier the differences are clearly indicated (see print of radiographs).

The oscillograms published in Tembrock (1964) reveal that in barking there is a sudden onset of high intensity sound and it is a possibility that a reduction in mobility in these folds might affect ability to bark. It should be stressed that Basenjies are not lacking in vocal powers; they seem unable to bark, but make their own special sound which Miss Tudor-Williams describes as “not unlike a young cockerel’s first attempt at crowing.”

We are deeply grateful to the owners who gave us permission to carry on these anatomical investigations...”

In my amateurish way it seems to me it is throat construction which causes, or is part of the cause, of barklessness, but it still needs a lot more research.



Here is the abstract from the scientific article about examining Basenji larynxes.

The Larynx of the Basenji Dog

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ABSTRACT

In two aged Basenji bitches, the lateral laryngeal sacculles were absent or reduced and the laryngeal recesses (ventricles of Morgagni) were shallow compared with those of other dogs. No other significant differences were discovered. It is not yet established whether or not these anatomical features are directly related to barklessness in these dogs. The terminology used for these anatomical features is discussed.

Citation: Ashdown RR, Lea T. The larynx of the Basenji dog. J Small Anim Pract. 1979 Nov;20(11):675-9. PubMed PMID: 547113.

In Basenjis, The Barkless Dogs (1976) Veronica Tudor-Williams wrote further:

“Since reading Dr. Ashdown’s findings on Fula throat, I remembered that Mr. F. B. Johnson, of Illinois, USA, mentioned the Basenji throat in his book *“Basenji—Dog from the Past”* which he wrote in 1971 and kindly gave me permission to quote from:

I needed a larynx from a deceased Basenji, preferably more than one, Mrs. Phyllis Elliott set aside her grief over the loss of two of her “Ka and Ba”

Basenjis and asked her vet to supply me with their larynxes, Dr. Erwin Small, Professor of Veterinary Clinical Medicine, and Dr. L. E. St. Clair, Professor of Biological Structure of the College of Veterinary Medicine at the University of Illinois agreed to examine the Basenji larynx. The following is a quotation from their report: „We have examined the larynx of the Basenji and compared it with a normal dog and also a cow. The vocal folds and muscle do not appear to be different. The ventricle has a position as usual except that it is very shallow. This prevents the vocal fold from being free on its lateral side. Apparently, this limits the vibrations of the vocal fold. In the cow there is no ventricle and no prominent vocal fold.”

“Based on their findings the Basenji does not bark due to its physical structure that differs from other dogs. This difference does not prevent him from offering the noises that he does make.”

I sent the extract from Mr. Johnson’s book concerning Basenji larynxes on to Dr. Ashdown at the Royal Veterinary College, and I have his permission to quote from his reply.

“It was very kind of you to send me the extract from the America report. Dr. St. Clair is a well-known Veterinary Anatomist and it is most interesting that he also found a shallow laryngeal ventricle. This makes it much more likely that it is the cause of barklessness. It also suggests a real function for this feature is. We have certainly been able to learn a good deal about dogs from the post mortem on Fula.

For a little change of perspective from an original source
....really it should be called: Why Basenjis don't talk?

Why the Basenji Does Not Bark!

Reprinted from "Newsletter of the Basenjis Club of Canada" in "*The Basenji*" October 1965

Originally from "*God Had a Dog*" by Maria Leach © Rutgers University Press 1961.

"To the Nyanga people of the Belgian Congo the dog is culture hero as bestower of fire, a skilled and indispensable hunter, and deviser of the dog bell. This is the story of the dog as culture hero. In the old, old time long ago a man of the Nyanga (named Nkhango) went out looking for honey. He came to the dwelling of Nyamuriri, the high god of the Nyanga, and the god being out, was welcomed by the dog, Rukuba. Upon seeing the fire in Nyamuriri's hut (for fire was unknown to man) Nkhango made a promise to the dog to look after him forever if he would give him some fire. The dog, saying "friendship is a fine thing," gave fire to Nkhango and cautioned him to leave before Nyamuriri returned. When the god returned and demanded to know where the fire was, Rukuba told him that he had fallen asleep and did not know. However, the god accused him of having given fire away and sent Rukuba from him. So the dog went to the Nyanga, to the home of Nkhango who welcomed him. One day Rukuba went hunting with the man and helped him kill a wild boar. Then the dog, because he was fast and left the man behind, made a little bell to wear around his neck so Nkhango would know where he was leaping and running in the long grass. Rukuba was so useful, and his master boasted so much of his prowess, that the village headman decided to use the dog as messenger (since the dog could speak), but Rukuba, lying by the fire he had brought to man, thought of what would happen if everyone wanted to use him as a messenger – he would always be running errands. He reasoned that if he could not speak, he could not deliver messages. So he decided never to speak again. And from that day to this, the dog of the Nyanga is barkless."