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№ 22

Primitive and Aboriginal Dog Society

Dear members of PADS and readers of our Newsletter!

In this, the 22nd issue, of the PADS Newsletter, we publish the remaining three articles meant for the Proceedings of the first international conference "Aboriginal Breeds of Dogs as Elements of Biodiversity and the Cultural Heritage of Mankind". In 2010, we will return to our usual pace, publishing four issues per year.

Best wishes for the festive season and for a prosperous New Year!

Sincerely yours,

Curator of PADS,

Vladimir Beregovoy

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DETERMINATION OF GENETIC STRUCTURE AND DIFFERENCES AMONG POPULATIONS OF DIFFERENT ABORIGINAL BREEDS OF TURKEY (Kangal, Akbash, Kars Shepherd Dog and Turkish Tazi)

ERDOĞAN M., TEPELİ C., DOSAY AKBULUT M., UĞUZ C., BRENIG B., ÖZBEYAZ C.

SLED DOGS OF RUSSIA

L. S. Bogoslovskaya

THE AFRICANIS

Gallant JP

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DETERMINATION OF GENETIC STRUCTURE AND DIFFERENCES AMONG POPULATIONS OF DIFFERENT ABORIGINAL BREEDS OF TURKEY (Kangal, Akbash, Kars Shepherd Dog and Turkish Tazi)

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Abstract

In this study, the genetic structure of the Kangal, Akbash, Kars Shepherd dog and Turkish Tazi, as native dog breeds of Turkey, is investigated by using polymorphic protein and microsatellite loci. The genetic similarities and differences between breeds and other dogs in the same locality are determined. It was determined that more than one shepherd dog breed is present in Turkey. Whether the Kangal and Akbash Shepherd dog breeds are local breeds or not is also determined by this study, for which samples of the dogs have been collected from several geographical regions of Turkey.

Introduction

It has been shown that the domestic dog (Canis familiaris) has similarities with a small wolf, living in the Northern hemisphere, with the same morphological, behavioral and genetic datas and results from the wolf's domestication (Baume, 1962; Fiennes, 1968; Herre and Röhrs, 1973; Akçapınar and Özbeyaz, 1999). From archeological discoveries, it is understood that the domestic dog lived in Germany and northern Iraq in the 12th-14th centuries B.C. (Akçapınar and Özbeyaz, 1999). It has not been explained definitively that the dog originated from one wolf population or from more than one, even with the help of archeological discoveries. However, the big differences between dog breeds on the basis of morphological variations indicate that the dog has different origins.

Humans took their dogs, as their most loyal friend, with them while on migration. It was thought that important differentiation between domestic dogs and the wolf occurred because these dogs mated with domestic dog breeds found in the areas where they migrated and the effect of selection in the early period of domestication (Clutton-Brock, 1984; Röhrs, 1986; Serpel, 1996; Vila et al., 2000).

It is understood from archeological discoveries that dogs similar to mastiff breeds lived in Anatolia in the 7th century B.C., and it is proposed that these dogs, living in Anatolia, were the origin of today's dog breeds in Turkey. It is also explained that the dogs came with a different culture, occupied Anatolia, and contributed to the creation of these breeds (Robinson, 1990; Kırmızı, 1994; Nelson, 1996). It is also thought that the migration of Turks from Central Asia and their establishment in Anatolia with their dogs also helped the formation of dog breeds in Anatolia. But, these dogs can be traced from the Anatolian plateau to Central Asia and the Afghan plateau even though different suggestions have been made about these dog breeds' history (Özbeyaz, 1994; Nelson, 1996). The dogs, similar to the shepherd dogs of Turkey, are pictured in tablets, found in Tibet in the 4th century B.C. The dogs in the tablets are similar to mastiff breeds. Dogs of the Tazi or Saluki breed are also pictured in these tablets (Kırmızı, 1994; Nelson, 1996).

These dogs were brought to Europe at different times in the Ottoman period and in earlier periods and were said to be original European shepherd dog breeds, such as the Great Pyrenees, Chuvatch, Greek Shepherd dog, Kuvasz, Shar Planinats, Komondor and Maremma Shepherd dog (Nelson, 1996; Reed, 1996). It was also explained that the origin of the German and Kangal Shepherd dog breeds was Central Asia and that they spread from there to Anatolia and to Europe (Caferoğlu 1962; Çoruhlu 1995; Kırmızı, 1994, Çetin and Tepeli 1996).

The Turkish Shepherd dogs were taken to some countries such as England and the USA about 40 years ago and in these countries associations called "Anatolian Shepherd Dog Clubs" were set up (Anonymous, 1995a; Anonymous, 1995b). The majority of these dogs consisted of crossbred shepherd

dogs because pure dog breeding does not exist in Turkey. Later, these associations spread to the whole world. After about 40 years, these associations, engaged in Turkish Shepherd dog breeding, accepted and spread the opinion that there is only one shepherd dog breed in Turkey and that this is the Anatolian Shepherd dog (Anonymous, 1995a; Anonymous, 1995b).

Turkish Shepherd dogs were classified separately as three different breeds: the Kangal, the Akbash and the Kars Shepherd dog at the International Turkish Shepherd Dog Symposium, held by the Seljuk University, Veterinary Faculty in 1996. In this classification, Turkish Tazi was put in the hound group. In this classification, the phenotypical characteristics of dogs were one of the main criteria (Nelson, 1996).

This study was carried out to determine the breed areas, the biochemical polymorphism and genetic structure (microsatellite) of the Kangal, Akbash, Kars shepherd dogs and Turkish Tazi breeds in Turkey and to show the genetic variations within and between breeds and the genetic relation between breeds.

Materials and Methods

To determine the morphological characteristics, genetic structure and relationship between breeds of Turkish dog breeds body measurements and 20 (3 protein and 17 microsatellite) polymorphic loci were used and for this purpose blood was taken from 141 dogs, representing 6 breeds.

Results

It can be seen that morphologically the Kangal has a larger body compared to other breeds and this finding is statistically important ($p < 0.05$). Akbash and Kars shepherd dogs are similar to each other as regards body measurements. The level of apparent breed differentiation is considerable and the FST value counted from all loci indicates that around 1.92 % of the total genetic variation could be explained by breed differences. The gene migration could have played an important role in genetic uniformity between populations in narrow geographical region. It is estimated that the maximum gene migration (Nem) for every generation occurred between the Kars black and the Kars gray shepherd dog. It is five different clusters as seen on a dendrogram, pictured from applied cluster analysis (UPGMA), and each breed obtained in different cluster. Four different clusters were obtained from Factorial Correspondence Analysis (FCA) and from these groups each Akbash, Turkish Tazi and Kangal dog was found on different extreme borders. But the Kars dog was found between these three groups and located more closely to the others.

Conclusion

As a result it was determined that the breeds have morphological similarities to each other but can be different from each other based on genetic analysis. Akbash and Kars white shepherd dog breeds are morphologically similar to each other but genetically they are present in different clusters. The existence of domestic dog breeds in Turkey in different clusters also indicates that these breeds have a different genetic structure based on searched loci. These results show that calling the Kangal and Akbash dog breeds by one name as the Anatolian or Turkish shepherd dog is incorrect. They also support the idea that there is more than one shepherd dog breed in Turkey and that the Akbash and Kangal dogs are breeding in an area that includes more than one geographical areas.

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The Indian Native Dog (INDog)

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ABSTRACT

Indian Native Dog (abbreviation: ‘INDog’) is a name that has been coined by the author to describe the common, familiar ‘street’ or ‘pariah’ dog, also known as ‘pye-dog’ in English usage in India. It is the same aboriginal dog of which the Dingo of Australia is the feral form, which has reverted to its original wild, pre-domestication appearance. It deserves the recognition that it is probably the last surviving example of mankind’s ancient domestic dog before its spread into colder areas in northern Eurasia to become the ‘spitz’ breeds and across the Bering Straits into North America to become the ‘yellow dog’ of the Native Americans. Mongrelization with later landrace types and breeds such as the

ancient livestock protection types has perhaps reduced the numbers of the original domesticate in the Middle East, whereas in the modern westernized world the combined effects of modern urban civilization and mongrelization with new breeds developed much later has turned much of the population of 'stray' dogs into 'mutts'. In much of the Indian sub-continent it is still the same dog our ancient ancestors knew.

INTRODUCTION

Based on the fossil evidence, it was commonly believed in the world of biology that the domestic dog was descended from the Indian or South Asian Wolf, Canis lupus pallipes, which still lives wild in India, Pakistan and southern Iran, and that this domestication had taken place in south-west Asia. It was also commonly understood that early humankind 'acquired' the dog in his spread outwards from the African continent. It was thus believed that the domestic dog came to India with early human migration moving from the west (Iran) towards South-east Asia and southern China in the east. The author began to create awareness of this type by writing popular articles for the world of natural science about from about 15 years ago, initially to refute the-then current theory regarding the origin of the dog as descended from the Indian Wolf. The INDog differs from the Indian Wolf in size, morphology, coat type and colour, and in its complete lack of wildness as compared to the wolf. It does not interbreed naturally with the wolf, even when both are free-living and in possible contact on the fringes of all villages in countryside which has a population of wolves, though both these canids can interbreed and produce fertile hybrids. In fact, had they been the same species, the Indian Wolf could then be considered a routinely cannibalistic species, since it regularly preys on the INDog.

This is the original autocthonous or 'landrace' breed of the country, found free-living as a commensal of man all over the Indian sub-continent (comprising political India, Pakistan, Bangladesh and Nepal) in hamlets, villages, towns, cities and even in megapolises. Where not mixed with blood of European pet dogs or other breeds and types, it is remarkably uniform in morphology all across the entire country, barring the totally desert region. This aboriginal primitive type had received no recognition of any kind ever, whether from the dog show fancy and its registering authorities, or from scientists of biology, zoo-anthropology.

This type represents one of the few remaining examples of mankind's original domestic dog and its physical features are the same as those of the dogs whose fossil remains have been found in various parts of the world, from very early remains in Israel and China to later ones such as those found in the volcanic lava at Pompeii, near Naples in Italy. Physically similar dogs are some modern breeds now found scattered around the Mediterranean, which are believed to have been taken to those places in ancient times by Phoenician traders and settlers. These breeds share an appearance generally similar to the African Basenji, and include the Pharaoh Hound of Malta, the Cirneco dell' Etna of Sicily, the Podengo of Portugal and southern Spain, and the Ibizan Hound of the islands of Ibiza, Formentera, Mallorca and Minorca, and of the coastal districts of Catalonia, which all appear to have been bred from the same basic stock. The Sicilian breed is believed to be descended from the ancient 'canes sagaces'. All these Mediterranean dogs are used for hunting rabbits, hares and even larger game.

In India these were originally the hunting partners and companion animals of the aboriginal peoples of India, whose fossil remains date back to Neolithic (Late Stone Age) and early Chalcolithic (Copper Age) times. They are still found with the aboriginal communities who live in forested areas and are even today used for hunting in the same age-old way of ancient mankind. (A note written in 1901 by a British general is attached as Appendix 'A'). All over the rest of India they are also found, living as 'pariahs' that live wherever man lives, in villages, towns and even large cities, scavenging for whatever edible that can be found. In cities and towns where modern European breeds of dogs have arrived as pets, these 'pariah' dogs are often mongrels, but most of them still carry a large percentage of the blood of the original dogs of India. Nevertheless the original type is still found in the millions in villages throughout India, and is completely uniform in appearance and thus instantly recognizable. Although a few are kept as household pets in the European manner, the overwhelming majority are free-living, ownerless dogs who establish their own 'territories' within a human neighborhood, and are known to the human residents of the locality. They are not at all aggressive to humans, and are, in fact, very keen to get human

affection. They become very loving and affectionate with those humans who show them recognition and affection.

Since these dogs have never been selectively bred, their appearance, physical features and mental characteristics are created by the process of natural selection alone. In addition, they have lost none of the natural intelligence of the natural dog, and are thus capable of reasoning just like wild wolves, jackals and foxes. Being very intelligent, they are easy to train, but being independent thinkers, they are not very biddable (unlike German Shepherds, Labrador Retrievers and Border Collies, for example), and do not like dull, repetitive 'obedience' exercises. They are extremely agile and better climbers than most developed European breeds, and have a fondness for climbing on to high places, such as the tops of brick walls, raised platforms, and the like.

They have also been referred as 'Santhal Hound' in parts of India which are inhabited by one of India's proto-Australoid aboriginal communities, the Santhal people of eastern India, who as with other aboriginal communities regularly use these dogs for hunting in the age-old pattern of ancient mankind. This has significance in that it was these proto-Australoid aboriginals of India and their kin who were the types of human who had spread into South-east Asia and then further into Australia, taking these dogs with them.

All unmixed INDogs, including those living for many generations as ownerless 'street dogs' surviving on scavenging and handouts by neighbourhood humans, retain the innate instincts of hunting in the ancient manner. This is a character trait which has not atrophied as yet through disuse. Given the opportunity, the instinct springs back to life, with or without human ownership or human leadership.

They breed only once a year, after the summer when the temperatures are dropping and the days begin to shorten, with the peak breeding season being in end-September to early October in the Northern Hemisphere. Puppies are born in the first half of winter, when the weather is cool and dry in most of India. (The timing of the breeding season is the same as that of the Himalayan Sheepdog/Tibetan Mastiff type of the Himalaya Mountains and of adjoining Tibet, even though there is no morphological commonality between this pastoral livestock protection type and the INDog).

The Indian Native Dog (INDog) has not been recognized by any kennel club, such as the Kennel Club of India, or by the Federation Cynologique International (FCI), even though similarly ancient or 'primitive' dogs have been recognized. The Indian Native Dog (INDog) was featured on National Geographic Channel's film, 'The Search for the First Dog', which was aired in the USA on March 11th, 16th and 18th, 2003, along with the other related ancient types such as the Canaan Dog of Israel and the feral Dingo of Australia. As far as numbers are concerned, the INDog probably has the largest numbers of any ancient type still present. It has been recognized by the Primitive and Aboriginal Dog Society (PADS), a world-wide grouping of enthusiasts which is based in the USA.

DISCUSSION

Differences from Canis lupus pallipes:

Recent research using the techniques of mitochondrial DNA (mtDNA) by Vila et al in the USA (1997) and Peter Savolainen in Sweden (2001 ?) have shown that the original domestic dog could: (a) Have diverged from an original or very wolf-like canid as early as 50,000 years ago, and not only as late as 15,000 years ago as determined by the paleontologists and zoo-anthropologists (b) Was most likely to have been domesticated in southern China, and spread outwards from there. If (b) is taken to be correct, then the domestic dog entered India from the east via Myanmar (Burma) and not from Iran in the west. In either case it is evident that India is one of the regions which received an influx of domestic dogs in its early domesticate form very early in the history of the species (or sub-species Canis lupus familiaris). Savolainen's conclusion that the original wild form was prevalent in southern China, and earlier archeological discoveries of a short-faced 'wolf' in ancient China significantly supports the probability that the dog entered India from the east, and thus from a wetter region than the range of the Indian wolf.

Morphological differences from Indian Wolf:

The Indian Native Dog significantly differs from the Indian Wolf in the following features, which make the two canids instantly recognizable as different, even in the field and at a distance, and even in poor light:

The INDog is appreciably smaller than the Indian Wolf. INDog heights at the shoulder are in the range of 16 to 21 inches, whereas the Wolf is from about 24 inches to 30 inches at the shoulder.

INDog body weights are less than those of the Wolf, even though the Indian Wolf is lightly-built, and the difference in overall bulk is noticeable. INDogs weigh from 15 to 22 kg, whereas the Wolf weighs from about 25 kg to 35 kg.

The Wolf has a noticeably larger head relative to the rest of the body. This can be seen even at a distance. From closer, or through binoculars, the head shapes of the two canids are also distinctly different, the INDog's being more triangular and 'spitz-like', whereas the Wolf's is much longer and leaner in effect.

The gait of the INDog and of the Wolf are distinctly different, and are quite easily distinguishable in the field even at a distance. The INDog has a 'springy', spitz-family gait, with a high head and tail-carriage, whereas has a more fluid, flowing yet elastic gait, with a low tail-carriage and holds it head parallel to the ground while moving purposefully at the flowing medium trot it habitually uses for traveling distances. The two gaits are unmistakeably different to the eyes of animal lovers and to wildlife watchers.

The INDog's coat is smooth and short in texture, though in sub-tropical India and cooler parts of tropical India it grows a thicker winter coat with an undercoat, the wolf's coat is longer even is summer, and it has a distinctive 'mane' or 'cape' coming from the back of the neck to the hackles at the shoulders, which the INDog completely lacks. This is the 'mane' effect seen commonly also in German Shepherd Dogs.

The INDog's common colour is rusty-red with a white tail-tip, though the red can vary from cream or sandy-fawn to dark mahogany red. It shows a basic 'Irish spotting' pattern of white as seen in Boston Terriers and Border Collies, with the white varying from very little, as in only white tail tip, to almost mostly white in a skewbald effect of brown patches on a mostly white body. It always has a white tail tip in all colours. Another colour often seen is black, with varying amounts of white as for the basic red. It is also seen in a 'standard' black-and-tan pattern, as seen in Rottweilers and Dobermanns, with or without varying amounts of white as for the red and the black, but again always with a white tail tip. The brindle pattern is not seen in pure populations in remote or undeveloped rural areas; in the few cases where it occurs, it is probably due to an admixture of 'Euro-dog' pet breed or sight-hound blood. This author has only seen one brindle among the thousands of INDogs over his life-time across the entire geographical range of the INDog in India, Bangladesh and Nepal. The Indian Wolf is almost invariably in varying shades of the common wolf 'grizzle' colour with a sandy and grey mixture which is generally invisible in open countryside when the animal takes a hiding position, and in poor light as at dusk. A few black wolves have been recorded, but blacks, whites, and creams are commoner in the Himalayan Wolf, Canis lupus chanco, than in the wolf of the plains, C. l. pallipes.

Relationship with the Dingo of Australia and with the Spitz Breeds:

Researchers who have written on the Dingo have all come to the conclusion that it is a feral domestic dog descended from those first brought to the island continent by the Australian aborigines in their journey. Its morphological characters match those of the INDog, with the exception that the Dingo exhibits a wider range of coat thickness, based on its habitat. The coat colour patterns are identical, and Dr. Corbett's dingo research has included the INDogs of Bangladesh as dingoes.

Since other researchers have reached the conclusion that the Dingo and the spitz breeds are related, it follows that the INDog and the Spitz breeds are related. Many canine authors do not include the African Basenji or its parent African aboriginal breeds as 'spitz' breeds, though some do. However, there is undeniably a relationship of appearance between the Basenji and the INDog, even though the two do not look identical in size, coat and tail carriage. In addition, the styles and methods of hunting using these dogs are common across such a vast area as India, northern Eurasia, Scandinavia and the Karelian Peninsula, and even by the Inuit in northern Canada, with the dogs naturally moving and behaving in

exactly the same manner in all cases. There is very likely an ancient genetic relationship between all the 'hunting' spitz breeds and their feral descendants. This 'family' of dogs would comprise the Basenji and its forbears in Africa, the Pharaoh Hound, the Cirneco dell' Etna, and the various Podengos of the Mediterranean, the INDog, the Hokkaido Ken, the New Guinea Singing Dog, the Dingo, the various hunting Laikas of northern Eurasia , the Karelian Bear Dog, the Finnish Spitz, the Norbottenspets, and even perhaps the Carolina Dog, though this last could also be nature's feral re-creation from a later influx of 'Euro-dogs' mixed with a feral remnant population of Native American 'yellow dog'.

CONCLUSION

The Indian Native Dog (INDog) deserves special recognition as a gene-pool of value in the preservation of mankind's first domestic animal in its original form, 'undeveloped' by humans in any direction in order to concentrate genes of a particular type through selective breeding either gradual or tightly controlled, for either morphological (eg, the Chinese Chow Chow) or physical-cum-temperament characteristics such as the Saluki, the working Border Collie, or the pastoral livestock-guarding landrace breeds. It has therefore retained both its ancient physical form, and also has not lost any of its mental faculties through selective breeding, which concentrates some attributes while simultaneously and perhaps as a result losing some others. It is a dog type with a vast gene-pool which can be used to counter many of the ills of over-tight selective breeding and inbreeding depression in many modern breeds. It also deserves to be seen as a pet and companion animal with no hereditary health defects and the most disease resistant, hardy and 'easy-keeping' breed of dog, with the lowest maintenance requirements other than love, companionship and outdoor exercise; a very worthy companion for a healthy human life-style.

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APPENDIX ‘A’

Hunting with Native Dogs in India
(A Note from the Past)

A Note in the Bombay Natural History Society Journal Vol. 14, 1903, by Lieut. General W. Osborn, Indian Staff Corps, dated June 30th, 1901. (Notes in italics are explanations added by Gautam Das, New Delhi, India, 6th April 2007)

“ I wish to say a word or two on behalf of the common dog of the country, the unjustly despised Pariah. I don’t mean the Mongrel, that one sees about Indian towns and cantonments (military bases, or permanent military camps), but the true Indian Pariah Dog, mostly red in colour.

That we have neglected this animal as a faithful companion, good watchdog, and excellent assistant in many field sports there is no doubt, though it is not strange that we should have done so, as sportsmen are a conservative body, many of whom consider that there is nothing good in the sporting line outside of England. But of the good qualities of the true Pariah, as I have to call him, I have seen many instances. Notably when passing the hot weather months on the Ramandroog hills, not quite forty miles from Bellary, I found there were sixteen men of a tribe called “Bender” in the village below my camp who used to hunt with their dogs which were of the same class as I have described, the true breed of country dog from which the sheep dogs are taken.

These sixteen men had a pack of eight dogs. Each man was armed with a spear, a small axe, and a knife. In addition to these, he carried a flint and steel, and tinder in his pouch. I am writing of a time years ago, when there was a fair head of game on the small range of hills, consisting of tigers, panthers and leopards, many sambhurs (large deer, ‘Cervus unicolor’, related to the Eurasian Red Deer and the North American Wapiti), pigs, etc. These “Benders” used to turn out for a hunt regularly twice a week, their game being always sambhur, and in those times it was not long before the pack of eight were in full chase of the stag or hind. I never saw these lose a sambhur once. When they found they stuck promptly to their quarry, and the end was always the same, stag, or hind, at bay, either against a rock, or in a pool of water, the pack laying around, and the sambhur slain at last by the spear of the “Benders” exactly, from start to

finish, as it is described by Sir Samuel Baker in his description of sambhur hunting with hounds in his book "The Rifle and Hounds in Ceylon".

I am not writing a sporting article but I am endeavoring to show the good qualities of the Indian dog. Sometimes these same "Benders" used to hunt hare in the grassy plains below the hills. Assisted by their eight dogs (all red ones) and armed with their throwing sticks, a curved hardwood stick with a knob at one end shaped something like a boomerang, I have seen them bring home fifteen to twenty hares, not one of which they could have secured without their dogs.

Once I was after a man-eating tigress, two "Benders" and one of their dogs was with me. I wounded the tigress which took refuge in a deep rocky glen, thickly covered in with a species of climbing, thorny mimosa. Entrance through this network of hooked thorns was impossible to a man, but the dog, a red pariah, was able to crawl in and found the tigress, and bayed her constantly for half an hour. When the dog got too close, the tigress would execute a charge with the usual music, but could not get home, as her back was injured. However, the dog stuck at his work, and I was able to mark the spot where the tigress lay by moving the bushes, and meeting each charge with a couple of barrels, at hazard, a lucky shot at last finished the business, and I bagged the tigress which I certainly should have lost but for the dog.

These dogs are trained by native shikaries (hunters, or sportsmen) to other kinds of sport. Once when duck shooting in Mysore country, I was seated on a hillock watching a flight of ducks on a sheet of water, when I saw a performance that surprised me. In a hole dug in the ground about twenty yards from the brink of the water was seated a shikari, well concealed from the birds. He had with him his old gun and red Pariah dog. His object was to attract the birds to within shooting distance. To accomplish this, every now and then, at fairly regulated intervals, he threw a lump of a thick kind of chuppatie (unleavened bread) they eat in these parts, down to the margin of the water. The red dog would then jump out of the hole, run to the chuppatie, eat it, and return at once to his master. This was repeated until the attention of the ducks was attracted and it was continued, the flock swam gently on in the direction of the dog in that curious manner in which many birds will follow, and mob their natural enemy. At length coming well within range, bang went the old musket, and the shikari emerged from his pit to gather in the slain.

The interesting point here, apart from the performance of the dog, is the well known habit of the wild birds following their natural foes. In this instance the ducks evidently mistook the red dog for their enemy the fox or jackal. In English decoys this habit has been taken advantage of. The decoy man trains a small red dog to show himself at different points to the ducks on the water. These invariably follow the dog slowly till he leads them into the mouth of the decoy net, and onwards, till the birds enter the fatal chamber from which there is no escape. Here we an Indian shikari following a practice that has been for ages in use in England. Did we learn this trick from the East? The Indian fowlers could hardly have got it from us."

APPENDIX 'B'

Other Indian Dogs

Indian Breeds

Most of the actual 'breeds' of dogs of India are of the sighthound type, but are gradually becoming rarer due to changes in the rural landscape caused by the intensification of agriculture, and to the changes in the wildlife laws, where conservation and protection laws have now replaced the earlier game laws. Northwestern India, which includes the modern state of Pakistan, is contiguous with Afghanistan and Iran, and thus the dogs are related to the sighthounds of those countries, particularly the shorter-coated version of the Afghan hound (or Baluchi Hound), which had never become popular as a show-dog in western countries. Western peninsular India faces Arabia across the Arabian Sea, and Salukis had been brought across by Arab mercenary soldiers, along with imported Arabian horses, for many centuries. The sighthounds of this region, therefore, are descended mainly from the smooth-coated version of the Saluki, though the feathered version is also seen.

The sighthound breeds of India are the Karvani (Anglicized to Caravan Hound) and the Mudhol Hound of the southwestern states of Maharashtra and Karnataka respectively, both descendants of the smooth Saluki, and the Pashmi which is found in both these states and is a feathered Saluki-descendant. There is also the Vaghari (or Banjara Hound) of central and western India, which is kept by the nomadic gypsies and the pastoral Rabari herders ('Vaghari' and 'Banjara' both mean 'gypsy'), which is found in two sizes: one of normal saluki size, and the other which is between the greyhound and the English whippet in size. Southern India has a sighthound breed known as the Chippiparai, and northern India has a breed known in English as the Rampur Hound, the Hindi/Hindustani names for it being 'shikari kutta' (meaning 'hunting dog') or 'tazi'.

One southern Indian large breed is unique in being a hound type that is not a typical sighthound. This is the ivory-coloured or off-white Rajapalayam of southern Tamilnadu state, which was once a boarhound and a guard dog. It tends to albinism, but can also be a very pale ash-grey.

Breeds Apparently Derived from the INDog: Pandikona and Jonangi

The Pandikona is a larger version of the INDog developed for hunting in a very restricted area in an undeveloped part of southern India, primarily for hunting wild pigs (Sus scrofa). It is reputed to be very courageous and aggressive in its hunting, and a very good guard-dog. (In any case, the INDog itself is a very effective watchdog) The Jonangi is a small terrier-like breed apparently also derived from the INDog, but smaller in size, derived in a small region along the eastern coast of southern India (the Coromandel coast) for hunting small game. They are both extremely rare outside their own areas of origin, and are not seen kept purely as a pet or companion animal.

Himalayan Breeds

The Indo-Tibetan or Himalayan breeds were all introduced to the western world through India and were first recognized by the Kennel Club of India (KCI) (established in 1896). The most common is the large guard-dog of the pastoral herders, the Himalayan Sheepdog/Tibetan Mastiff type, known in Tibetan and Indo-Tibetan languages as 'Do-khyi' (meaning 'tied-dog') and in Hindi as 'Gaddi' (of the 'Gaddi' shepherds) or by the Hindi/Nepali word 'Bhotia/Bhutia' (meaning from 'Bhot', which is the Hindi name for Tibet, similar to 'Bho', the Tibetan name for Tibet).

Two smaller Himalayan breeds are the Lhasa Apso and Tibetan Terrier, together known in Tibetan or Tibetan-derived Himalayan dialects as 'Apso singye-khyi', meaning 'apso lion-dog': (the Tibetans do not differentiate between the two, and separation by size was done by western dog-lovers, not by the Tibetans). These names were given originally by the KCI. The Shih-Tzu is a Chinese-bred version of the Lhasa Apso, selectively bred for a shorter muzzle, and thus tending towards the Pekinese in appearance.

The other small Himalayan breed is the Tibetan Spaniel (another English name given by the KCI, the first kennel club to recognize it), which in its village version is known as the 'Damchi' and is commoner in the eastern Himalaya, in the Indian state of Sikkim and in Bhutan.

THE AFRICANIS

Gallant JP

Abstract

The name 'Africanis' is a junction of 'Africa' and 'canis'. It stands for 'dog of Africa' and refers to the aboriginal dogs of the Bantu and Khoisan speaking people in Southern Africa. Like all other dogs, Africanis forms part of what Linneaus classified as Canis familiaris or the domestic dog. The aim of this study is to trace the origins and history of these dogs and to situate them as a heterogeneous geographical race. Such a land race is largely the result of natural selection within the conditions set by a particular human society.

INTRODUCTION

Homo sapiens emigrated successfully from the African continent around 80,000 years ago. This crossing of the Red Sea into the Arabian peninsula was the first important step leading to the progressive peopling of the world by modern humans (Oppenheimer, 2003). In the East, these ancestors of modern humans came across wolves. These pack hunting predators had previously been unknown to them in their

continent of origin. Behavioural patterns prevailing respectively in the hunter-gather families and the wolf pack organisation most likely caused a mutual rapprochement. Certain wolves adopted a scavenging commensally lifestyle along the human trail and evolved into protodogs (Gallant, unpublished).

Recent DNA research indicated that this transition from wolf (Canis lupus) to dog (Canis familiaris) took place more than 15,000 years ago in the Far East (Savolainen, 2002). Savolainen also pointed out that "the first domestication of wolves would not have been an isolated event, but rather a common practice in the human population in question". From this cradle in the Far East the domestic dog spread over the entire world in the company of human migrations, nomadic movements and transhumance. Fossil records showed that early dogs had reached present day Israel during the Natufian period 12,000 years ago (Tchernov, 1997). Epstein (1971) already pointed out that the domestic dog, like goats and sheep, was imported into Africa. The earliest archaeological evidence for Canis familiaris on this continent has been found in Neolithic settlements in Egypt. That is in Nabta Playa in the western desert and Merimde Beni Salame and Naadi in the Nile delta. The findings were dated respectively 4,700 and 4,500 BC (Gautier, 1998; Boesneck, 1988).

MATERIAL AND METHODS

Data obtained from a wide range of scientific papers archaeological sites where Canis familiaris had been identified in Africa were placed on the African map. By marking the earliest dates for different regions an overview of how the domestic dog progressively spread over the African continent was obtained (Gallant, 2002). It is important to note that the earliest presence of the dog antedates the reign of the first pharaoh in the Old Kingdom by about 1,500 years. The Ancient Egyptians certainly refined the art of dog breeding. However, their input only started after the dog in its primitive form had wandered far beyond the borders of Ancient Egypt. The archaeological record shows that during the 5th and 4th millennium BC the dog had continued its 'conquest' of the African continent in a western direction deep into the (then not so dry) Sahara and also along the river Nile into the northern part of present day Sudan. Proof of this is witnessed by rock paintings discovered in the Magreb, Tassili and Hoggar mountains in the desert and by representations of dogs on Neolithic pottery at Hierakonpolis in southern Egypt.

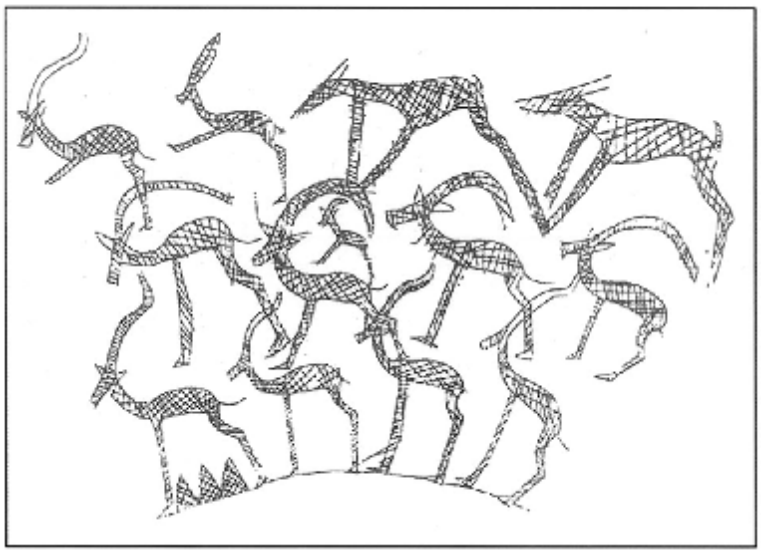

Fig. 1: Two slender gaze hounds wearing collars (top right) are pursuing a hare and an antelope. This is a detail from decorated pottery found near Hierakonpolis and dated c. 3,700 BC (Hendrickx, 1992:7)

It seems that the moving frontier stopped for about a thousand years. Then, as from 4,000 years ago, followed an expansion from the Sahara into the entire north-western part of Africa (MacDonald, 2000); and then from Sudan into Ethiopia and southwards into the northern parts of Kenya and Uganda. It has been suggested that the equatorial belt formed a natural barrier hindering a spontaneous southward spread. The dog had to wait for Iron Age technology and its expansion. Based on comparative studies of

ceramic styles and language distribution archaeologists are of the opinion that the spread of the Early Iron Age Bantu speakers originated from the grasslands situated at the Cameroon - Nigeria border (Huffman, 1999). These Early Iron Age people started their migration ca.2, 000 ago and are thought to be the people who brought the Iron Age tradition and lifestyle of cattle herding and agriculture to subequatorial Africa. It is suggested that once they detected tsetse free corridors along the Great Rift Valley they found a safe passage for their cattle and made their way through Tanzania, Malawi, Zambia and further south. Archaeozoologists also identified fossils of domestic dogs in their early settlements. The earliest evidence of domestic dogs in South Africa dates back to the year 570 AD and comes from a site on the farm 'Diamant' on the Lapalala river in the Limpopo province (Plug, 2000). The fossils found there indicated that two types of dogs prevailed: a slender and a stockier one. The Early Iron Age expansion continued in South Africa; and by 650 AD the domestic dog had reached the lower Thukela basin in present KwaZulu-Natal (Van Schalkwijk, 1994 a, 1994, b). As the Early Iron Age spread into the subcontinent, contact and trade developed with the local San hunter-gatherers and also with the pastoral Khoikhoi people who had arrived in South Africa some time earlier along western migration routes (Ehret, 1982; Elphick, 1985). As such the Iron Age tradition, including the dog, became part of the Khoisan life style. The earliest record for the presence of the dog in a 'strandloper' settlement was found in a site at Cape St. Francis and dated back to the year 800 AD (Chappel, 1968).

FIg 2: Hunting scene with dogs. Cave rock art. Hill station at Sefar; Tassili-n-Ajjer, Algeria, dated c. 3,700 BC (Mery, 1968:15)

This explains why in 1491 Vasco da Gamma's diarist, after anchoring in St. Helena Bay on the West Coast, described, amongst others, the dogs of the local Khoisan people and mentions that they "had many dogs like those of Portugal which bark as do these". Following the establishment of a supply station

at the Cape of Good Hope by Jan Van Riebeeck in 1652, early ethnographers and travellers ventured inland and reported on the dogs kept by the locals to which they referred as Hottentots and Bushmen. It has to be noted that in those days the Bantu speakers were virtually absent in the Cape peninsula. They occupied the north-eastern and eastern part of the country north of the Kei river. It took several decennia before contact was made with them and their dogs, hence the misconception that San and Khoikhoi were the first to own dogs in South Africa.

Natural land races and pure-bred breeds

It is difficult for people with a western mind set to think about dogs in a nonconformist manner. The Victorian invention of pure-bred dog breeds with prescriptions of external features laid down in breed standards has increasingly been haunting westerners. Remember that prior to the establishment of the Kennel Club (London) in 1873 and the fashion of breeding dogs mainly for cosmetic purposes commanded by phenotypic breed standards, dogs had been associated with humans for many thousands of years. After their domestication they had evolved into geographical races as a result of adaptation to a specific environment and the demands imposed by the humans with whom they were sharing a particular ecological niche. In the western world ancient canine land races were exploited to extract and create thoroughbreds, which were exported as exotic stock all over the world. In the process the western world has lost most of its ancient heterogeneous land races. Inbreeding on a preferential small foundation stock produced the various pure-bred standardised breeds, which are promoted by the national kennel organisations which, around the turn of the 19th century, were established in the western world in imitation of The Kennel Club (London).

Old canine land races still occur in Africa, and, in South Africa, under the indirect influence of a policy of apartheid, not only people were kept apart but the Africanis in the former homelands largely remained free of an exotic gene input. Although the African dogs - depending on the region in which they thrive - may look different in their phenotype, they all can be traced back genetically to the primeval dogs which from the Near East entered the African continent roughly 7,000 years ago. They do not have a written pedigree but their genes cannot lie. Comparative blood typing of samples collected from desert bred Saluqis in the Near East with those obtained from rural dogs in the Nkandla area in KwaZulu-Natal; clearly indicated genetic relationships (Greyling et al, 2004). Extended DNA research is currently carried out, on one hand to establish a DNA profile for the Africanis, but also to define the genetic relationship within Canis familiaris populations world-wide.

DISCUSSION

The Africanis Society of Southern Africa was established in 1998. Its policy is to conserve the Africanis as a heterogeneous geographical race. These dogs are of an immense genetic value to the canine world. Their morphology and behavioural patterns have been moulded through natural selection and several thousands of years of adaptation to the conditions of the African continent. They have been shaped by Africa for Africa. They still have all the qualities, including physical and mental health, which one can expect from a genuine dog. They are less infected by many of the genetic defects which empiric and thoughtless breeding for superficial enhancement has inflicted to our modern thoroughbred dogs. Western society still looks at the Africanis with contempt, sees them as ugly mongrels and considers them as the poacher's right hand. Extensive fieldwork, close observation and coexistence with these dogs over the past thirteen years, have indicated that such approach is biased and wrong. They are an African heritage and best suited for an active lifestyle on the African continent.

Although the Africanis, opposite to selectively bred breeds, shows variable appearances, natural selection did provide common demeanour and character. Because the Africanis has for centuries roamed freely in and around rural settlements it combines attachment to humans with a necessity for space and freedom of movement. The people to whom these dogs traditionally belong do not tend to make body contact with their dogs. However, their settlements are seldom deserted from humans, other dogs and livestock, ensuring adequate socialisation and environmental adaptation. This also entails that the Africanis learns to display watchful territorial behaviour. They are well-disposed without being obtrusive. When pushed around the Africanis can demonstrate reactive aggression. The Africanis displays unspoiled

social canine behaviour with a high level of facial expressions and body language towards congeners and humans. Therefore, when approached correctly, it is easily trainable. Although it is a hound with a swift chase response, it is able to live in and around the homesteads in the company of livestock without ever harming it. This is the result of correct environmental adaptation and imprinting. This can also predispose the Africanis to the life of flock guarding dog. The rather demanding conditions imposed by its environment have over the years induced the Africanis into an energy conserving life style. It has a steady nerve constitution, but it is always cautious in its approach to new situations. In other words it displays a high survival instinct. It is a misconception to believe that Africanis independently tend to form packs to hunt indiscriminately. Traditional African hunting with Africanis is on the decline. It is currently increasingly replaced by western style 'coursing' with Greyhounds. When used for traditional hunting the Africanis is active and alert, shows great eagerness, toughness and endurance. It is a great opportunist that easily adapts to modern western lifestyle without however losing its natural need for space and a certain degree of freedom. It has to be noted that the Africanis has never been used to the western concept of dog obedience training. However, because of its innate subservience and high sense of attachment to pack leader, it follows its handler in a natural way. The Africanis has an outstanding sense of smell. It can concentrate on a particular scent. This ability can be trained (enhanced) from a very young age.

To summarise it may be said that the Africanis is not a man-made, selectively bred, standardised breed of dog but an unspoiled natural breed or land race. It displays authentic canine behaviour. It is consistently healthy and, over the years, it has developed a resistance against internal and external parasites. It is a cultural and biological heritage. Its wide array of mental and physical qualities does not merit the biased approach which the western world has bestowed upon it. It is for that purpose that I wrote The Story of the African Dog in an effort to make the public aware of the genetic, historical and cultural value of these dogs.

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