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DROMEDARY CAMELS IN SUDAN, TYPES AND SUB TYPES, DISTRIBUTION AND MOVEMENT

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ABSTRACT

It is believed that dromedary camels entered Sudan from Egypt based on a specimen of camel hair rope of an old kingdom found at Fayum in Upper Egypt 2980-2475 B.C. In Sudan, the oldest evidence is a bronze figure of a camel with saddle found at Meroe 25-15 B.C., indicating that the animal moved south by that period. Sudan holds the second largest camel population in the world (about 4.4 million). Camels in Sudan and elsewhere are classified as pack (heavy) and riding (light) types according to their function. Recent studies have been made to classify the camels according to their performance (dairy camels, meat camels, dual purpose camels and racing camels). The following classification for the Sudanese camels is based on conformational and tribal ownership: pack; riding; hybrid. The pack camel is the heavy type which makes up the majority of camels that are maintained by nomads (about 80%). These camels are subgrouped into Arabi types and Rashaidi (Sawahli, Dailly and Souda) types. The riding camel is the light type which breeds mainly in the northeast part of the country and in the River Nile State. The best riding camels in the country are found east of the Nile and mainly in Kassala State and Red Sea State. The 2 main types are Anafi and Bishari camels. The hybrid camels take their own line on breeding. They are called Asshab (Anafi and Arabi), Kilaiwau [Anafi and Shallagyai (Bishari)] and Banagir [Anafi and Amirab (Bishari)]. Generally, Darfur and Kordufan camel types move north and south, and the eastern camel types mostly move west and east. The camels avoid the clay soil and Tsetse fly on southern part of the country during the rainy season while searching for water and food.

Keywords: Dromedary Camels, Sudan, Red Sea State.

INTRODUCTION

From about 24.730.320 camels worldwide [1], the dromedary accounts for 95%. The Near East, North Africa and the Sahel region have about 70% of the world's dromedary population. Somalia and the Sudan together own more than half of this figure [2]. It is believed that dromedary camels entered Sudan from Egypt, according to the specimen of camel hair rope of old Kingdom which was found at Fayum in upper Egypt 2980 – 2475 B.C. In the Sudan the oldest evidence is a bronze figure of camel

with saddle found at Meroe 25-15 B.C.[3], indicate that animal moved south by that period. Sudan holds the second largest camel population in the world estimated at 4.4 million [1], distributed as follows: Kordufan State 36.81%, Darfur State 23.70%, Gedaref State 5.18%, Kassala State 13.47%, Red Sea State 7.01%, Blue Nile State 4.48%, Sinnar State 2.45%, Gezzeria State 2.59%, White Nile State 0.74%, Northern State 1.03%, River Nile State 2.40% and Khartoum State 0.14% [4].

The ability of the camel to withstand such adverse environmental conditions is attributed to its adaptive physiological mechanisms, aided by an array of supporting morphological features and behavioral attitudes. Camels provide milk, meat and wool to the rural society, also for transporting goods and crops. Camel export in some countries began to contribute substantially to national economy. Camel racing practiced in some Arab countries has furnished new and extra dimension in camel industry. The unique characteristics of camel physiology and reproduction pose an exciting challenge to interested research workers. In Sudan the ability of the camel to thrive in the arid and semi-arid areas (13 N⁰) western and eastern Sudan made it an important source of livelihood to nomadic people in these parts of the country.

The majority of the studies in camels have been mainly on its anatomical features and physiological adaptation to desert conditions.

Information in this study depends on previous study and meeting nomads in all over the country on their places according to their seasonal movement.

Camels in Sudan

Camels in Sudan are owned by tribes that inhabit the dry semi-desert areas, and because of its limited distribution and numbers, there has been no development in identification of different breeds as in case with other types of farm animals. Camels in Sudan and elsewhere are classified as pack (heavy) and riding (light) types according to their function. Recent studies had been made to classify the camels according to their performance like dairy camels, meat camels, dual purpose camels and racing camels [5] and [6].

The following classification for the Sudanese camels is based on conformational and tribal ownership:

I- The Sudanese Pack Camel Types and Subtypes

Heavy type which makeup the majority of the camel maintained by nomads about 80%; [7]. They are sub-grouped into **Arabi** types and **Rashaidi (Sawahli)** types.

I-I. The Arabi Type

In Kordufan, Darfur and Blue Nile they constitute about 96%, and in eastern Sudan it is about 55% from the total in that area [7-8] mentioned that most of the Sudanese camels are large heavy massive types with slow mobility. Mainly the Arabi type is described as a large heavily built animal with well developed hump, and it has a short hair except in the shoulder and hump. The mature camel weight about 400 - 500kg as a life weight, and can carry about 275kg over 25-30km per day [9-10], and is sandy gray in colour. In the western Sudan, the Meidob and Hawawir have herds of comparatively light weight camels; some of which can be ridden [8].

Kenani (Rufae) sub-type

This sub-type is more distinguishable than other sub-types because it has a long neck and a black condensed hair on the hump, throat, ear and brow, the dominant colour is the dark brown. They are found mainly in Kenana and Butana regions. Their movement is between Alrrahad scheme and Alddindir River to Alsubagh in Albutana, They take Massar (specific way for movement) Al Gelaaie (AddarbAlaswad) in north to Alsubagh in Albutana region where they spend the rainy season, and south to their residence in Kenana region, that is through Beia, Balouse and Baidaa, and some times Bassoraa in Ethiopia. This sub-type is owned by Kenana, Rufaa and Arakaiein tribes. Some of Kenana tribe that raise this sub-type are: (AwladGallis, Abu Khamseen, Barakatt, Awlad Holly, Wad Al Reem, AwladYounis, Eial Al Zaki and Sourab), and also raised by Rufaa, Arakeen and some other tribe in the Butana region mainly between Blue Nile and Alrrahad River [7].

Lahawi sub-type

Like all Arab types, but it is brighter in colour (Ahaw) means the lion colour. They exploit MassarGhabttAlfeel from Abu Delaig, Gaily and Alsubagh in Albutana region where they spend Autumn to around Atbara seasonal River and Setait seasonal River where they spend Summer season that's through Kassamour mountain, Karkoura, Um Gargour, Almagataa, Alshowak, Tamargo and Wad Alhelaw. That's also true for some of kenana tribes, Shukria and Rashaida. Some of Lahawi tribe that raises this sub-type are: (Aiadab, Maageed, Dowaih, Wad Alhadi, AwladSowar and Gawamis)

BaniAamir (Dahaseery) sub-type

This type is from the Eritreanhill region, some of them show the classical conformation of the head and neck seen in the Beja camels. Bisharian bulls are in demand as sires [8] described it by the flat structure of the head bones, and paralysis of the lower lip, the Camel fancier (unrelieved ugliness), and some of them suitable for riding. Their movement is limited in the borderlands of Eritrea and Sudan. Some of BaniAamir tribe that raises this sub-type are: (Ashraff, Habab, Bait Maala, Hamaseen, Almaada, Afflanda and Naptab).

Shukria sub-type

A light Arab type in Albutana region. Some of Shukria tribe that owned this sub-type are: (Bawadra, Kawahla, Seraishab, Eashab, Nurab, Khawalda, Ahamda, and Sennap) [11]

Batahyn sub-type: Albutana region camels, light Arab types.

Arakain sub-type: Albutana region camels.

Shanabla sub-type: South Kordoufan camels, their movement between Sowdry and Talowdi and Elrrahad Abu Dakana, Some of Shanabla tribe that raise this sub-type

are: (Abu Omair, Sebaihat, Hawal, AwladKhashoon, Awlad Haddad, AwladNasir, Ambareesh, Awamra, Gekhaisatt, Haddad and Khashoon).

Kawahla sub-type: Kordufan camels, some of Kawahla tribe that raise this sub-type are:

(Muradi, Ababda, and Baragna).

Hawawir sub-type: Kordufan camels, some of Hawawir tribe that raise this sub-type are:

(Habassab, Gubbab, Rubbab, Guttat, and Hararin).

Gemei sub-type: North Kordufan camels.

Dar Hamid sub-type: Kordufan camels, some of Dar Hamid tribe that raise this sub-type are: (Nawahia, Maganin, Demairatt Abdu, Albasheri, Um Saadoun, Tenni, Um Kraidem, and Nesairatt).

BaniGarrar sub-type: Kordufan camels.

Kababish sub-type: North Kordufan camels, some of Kababish tribe that raises this sub-type are: (Rebaigat, Sarragab, AwladOgbb, and AwladAtaweia).

Hamar sub-type: West Kordufan camels.

Maidoub sub-type: Dar Fur camels. (Al Malha – Geriott).

Zayadya sub-type: Dar Fur camel.

Rezaigat (Naylawi) (Um Gallol) sub-type

Dar Fur camels, like all Arabi type has a hair on shoulder and hump, which removed spontaneously during rainy season and grows again during winter or according to the camel nutrition condition.

Zaghawa sub-type: Dar Fur camels.

Generally Western tribes move from where they spend the rainy season in HamratAlshaikh, Um Unduraba, Alsaial, Almazroub and Umbadir in Northern Kordufan, and Almalha, Kutom and Maleet in Northern Darfur to where they spend the summer season in the South in Alobaid, Elrrahad, Elkhawai and Elnohoud in Kordufan, Neiala and Aldeain in Darfur, then they return home at the beginning of rainy season. In November they begin to go to spend the winter in northeast of the country in Wady Hour, WadyAlmugadam and Aljezo region. From Umdurman to north Kordufan in Sodri, Um Froua, Abu Ziegaima, Um Badir and Um Guzein in the borderland between Kordufan and Darfur State, and then to KomatAlzaiadia and Al Fashir in Darfur. To Egypt they go first to Dugla (previously to HafirMashu), where they document their animals and walk beside the River Nile till enter Egypt.

I-II. The Rashaydi (Sawahli, Deaily) Type

They are raised by Rashayditribe, and known also by the red sea camels or Zebaid. They are found between Tokar and Kassala to Karran, and can also be grazing east of Atbara River towards Kassala, and in Karkoura, Um Gargour and around Alshowak. This camel is pinkish-red in colour, and because some of them are darker they are called **Souda**, it is slightly shorter than Arab camels. Rashayditribes named it by **Deaily** for its gaining weight

from a poor source of diet, and then they lose it slowly. Wardeh (2004) classified this type as dairy camels (2000-3000 kg/head/season) [12-13] and classify it by dual purpose camels. Some of Rashayda tribe that raises this sub-type are:

Baraasa (Galadeen, Du Amrei, and Marazeg), Baraateikh, Gazayza and Zenaimat.

II- The Sudanese Riding Camel Types and Subtypes

It is the light type, which bred mainly in north-east of the country and in the River Nile State. The best riding camels in the country are to be found east of the Nile, and mainly in Kassala State and Red Sea State [8]. The two main types are:

II-I. The Annafi (Al-Shukri or Al-Juhani) Type

The fastest and smooth, and it has a very fast pace over short distance up to 25 miles [8]. It has long legs, with a bright white color, long neck and the ribs are not very sprung, upright ears, and has long narrow head. This type owned by Sukria, Lahawin, Batahyn, Nurab and Dapaina. When all tribes especially in the east talk about Annafi camel they mentioned Degaim tribe the main owners, but now they have no Annafi camel. Their movement between Errahad River and Albutana region in the schemes and around Kassala and Gedarif State [14].

II-II. The Bishari (The Red Sea Hills "Beja") Type and its Subtypes:

Stronger and slightly larger than the Annafi type. It is a general purpose mount with a better conformation and a well-developed neck. This type owned by the nomads of eastern Sudan like Bisharin, Hadendwa, Amara and BaniAamir, together they form Beja group. Most of them move in the rainy season in July from Atbara River to Kassala (Tokolopab and Shalaloub Mountain, Kawataib) they spend the winter rainy season (October –January) in Egyptian and Eritrean borderland in Shalatain, Halaib; some of them spend it in Alsuboot (region free of houses) region south to Algash River. During the summer season (February-June) some of Hadendwa spend it in Soutriba, Klanayaib, Saloum, Eairakwan near red sea mountains, and also in KhorOko, others spend it in Alback region (about 135 km East Atbara). This type can be divided according to the location and tribal ownership to:

Shallagyai: The coasts Bisharian camels graze the Adlib (*SuaedaFruticosaForsk*), the most desired herpes for camel any where is AlsihaHerps(*BlepharisEdulis.Pers*), BagheilHerps(*BlepharisLinariaefolia.Pers*) and a little from Hamadib(*IndigoferaArenaria*). **Shallagyai** is whiter in color and the bigger one between Bisharian camel subtypes. Milk production is higher compared to **Aririt**, **Shallagyai** produced 6-7 kg, and 18-21 kg of daily milk during the rainy season [15]. The main owners are the Hadendwa (Bashkwab, Bisharab, Samarai, Shabodainab,

Gouarhabab, Demailab, Oud, Balolab, Haddlab, Algeni, Baiodab, Houkolab, Kelitab, Bamadiab, Aaliab, and Awanieneb), they are owned also by Amarar. **Shallagyai** means the wide yard that's by the Hadendwa accent. **Shallagyai** is the famous one in Bisharian types.

Magchatt: Found around Sinkkat, Khour Baraka, KhourArbaat, KhourLangeb and KhourAamor , they depend mainly on Arak tree (*SalvadoraPersica Linn*), as food resample to **Kaatyai**. It has a white colour, small, fast camel, this type can't able the thrust and able the salty water, and has a good milk and meat taste. It is Hadendwa camels.

Airit: Red colour, smaller than Shallagyai, graze in Alatomour desert between the red sea mountains and the red sea. Graze Tabbas (*LasiurusHirsutusBoiss*), grasses and tress like Tondop (*Capparis Decidua*) and Salam (*Acacia Ehrenbergiana*), in soutriba mountain where there is a source of dominant salty water (Saraff) that ran till reach MoukeVally. The main owners is the Hadendwa (Bashkwab, Bisharab, Samarar, Gouarhabab, Demailab, Oud, Balolab, Haddlab, Algeni, Baiodab, Houkolab, Kelitab, Bamadiab, Aaliab, and Awanieneb), owned also by Amarar . Airit means the red colour that's by the Hadendwa accent. Other names for Airit is **Kaatyai**, **Barakawi**, **Langabi** and **Haiadou**.

Kaatyai: On the red sea mountain especially Klanayaib mountain near Salloom, eat there Salam (*Acacia Ehrenbergiana*), Sidr (*ZizyphusSpina-Christi*) and Hegleig (*BalanitesAegyptiaca*). Camels are very small and their feet are hard as rocks [8], the more distinguishable thing that we find a short black hair in the coronet. Owned mainly by Amarar around GouappVally near Addarweb (Arfowab – Atman – Nurab – Kurbab – Hamdab – Abd Al Rahmanab - Abd Al Rehamab – Selaiman - Salmab). **Kaatyai** term refer to eclectic browsing habits.

Haiadou: Owned by Aamrab in Khelaiwa region and Alzahatiab, about 125 km east Atbara. These sub types of Bisharian camels is smaller and known by measuring the earth, that's due to its galloping manner.

Amirab: Bisharian camels, small light camel, found between Aldamer, Atbara, Barbar and Red Sea State.

Bagalagack: Owned by KroppAaliab, Bajalagack means the tall sub type with slit ear, that's also by their own accent.

Gambeiai: owned by Aaliab in Alback region near Ougreen about 120 easts Atbara [16].

Samalawi: Also good riding camels, owned by Aaliab [16].

Allaatkaam: The slower one, owned by Amirab [16].

Hybrid Camels

It is a majestic type (Gillespie 1962), and now this type takes its own line on breeding:

Asshah

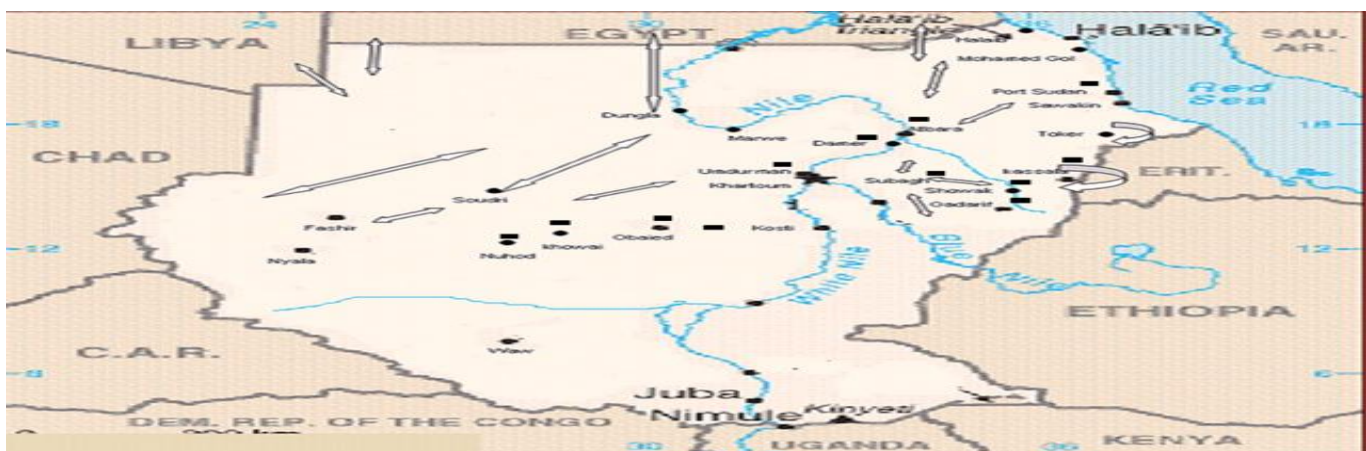
Hybrid of Annafi and Arabi types, this hybrid distributed between tribes that exist mainly in eastern Sudan, Albutanaregeions, Kassala and Gedarif State, and also found in Kordofan and Darfur.

Klaiywau

Owned by Aalaibgandatt in Abu Namil region, it is also found in KhourOko. This type an hybrid of **Annafi** and **Shallagyai** (Bishari) types, that's to get benefit from Bisharian types it has a quick start in racing, and finishes the race with the same power that it started.

Banagir

The all thought that it's a hybrid between **Annafi** and **Amirab** (Bishari). This cross type bred by HamdorabBisharin on the coastal plain and Khors south and west of Halaib and Eddamer, Atbara and Barber.



Sudan Map Showing Nomads Movement.

■ Collection Points.

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