Mesopotamian Buffaloes (The Origin)

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Abstract: The aim of this study to throw light on Iraqi Buffalo origin, comparing between past archeological theories based on ivory materials and cylindrical seals findings in Mesopotamia and recent molecular biological studies that based on DNA data.

The highest population density found in Mesopotamian Marshlands between three southern governorates (Basrah, The-qar and Missan), respectively which represented the home tract of buffalo and their typical breeders in Iraq, locally named Ma"dan, well known by their traditional community, and characteristic accent, mainly raising buffalo for production of famous dairy thick butter cream, widely consumed by Iraqis at breakfast, named (GAYMER). There is no justification to classify Iraqi buffaloes to a distinct breed, we have many phenotypes from black, piebald to albinoid, with traditional raising system.

There is no registration of cross breeding, only interbreeding, but latest country Karyotyping survey and body dimensions revealed that our buffaloes were from reverine type in most populations with large size and have good potentials for milk production.

There have been numerous archeological theories around world based on cylindrical seals and archeological materials in determining the origin of buffalo in Mesopotamia and Indus Valley. Developing in molecular genetics studies will appeared to throw light on these archeological evidences, there are three recent DNA basis studies, the most updated Microsatellites markers Iraqi study [1] showed that our buffaloes were originated in Iraq, not imported from India, while the two other studies [2, 3] support the theory that Mesopotamian buffaloes were brought to Iraq from the Indian subcontinent before thousands of years and their breeders (MA"DAN) from Marsh Arabs are descendants of the population Sumerians principals from the region.

According to archeological remains referring to buffalo raising in Mesopotamia before Christ confirming by recent Iraqi molecular studies, these updated data should leading us to register our buffalo as dependant breed in riverine group under the name of (Mesopotamian Buffalo) the home tract that had been raising, with achieving all tools to upgrading and protecting this old National Genetic resource all around country.

We need more phylogenic studies should be achieved on Iraqi buffaloes for confirming when and where originated and domestication was happened.

Still open question?

Keywords: Origin, Mesopotamian Buffaloes, Breeders (Ma”dan).

INTRODUCTION

The marshlands in southern of Iraq historically comprised the largest wetland ecosystem of Western Eurasia. A rare aquatic landscape in the desert, they also provided habitat for important populations of wildlife, including endemic such as buffalo And endangered species [4].

In historical times B. arnee, the progenitor of Asian buffaloes ranged across South and south –East Asia, occurring from Mesopotamia to Indochina, but both Mesopotamia and Indus Valley cultures probably domesticated this beast appear on seals and ivory materials at second millennium B.C. they have typical crescentric horns of the wild swamp buffaloes [5].

Marsh Arabs (Buffalo breeders in Mesopotamian southern marshes) act as a living link between the present inhabitants of Iraq and the people of ancient Mesopotamia, ethnically the populations composition has been heavily influenced by immigrations and intermarriages wit Persians to the east and Arab Bedouins to the west [6].

The current marsh dwellers, marsh Arab society, whose livelihood has been entirely dependent on water buffalo live together in a symbiotic relationship one, should probably not think of the water buffalo in the marshes as fully domesticated [7].

Buffalo breeders (MA"AN), suppressed by many factors along five decades ago (three Gulf Wars, Systematic Marsh drainage, Economic Blockade), leading to decline in buffalo population and huge demographic changes, during that period many professionals and politicians were harboring hatred against buffaloes [8].

Marshland areas after the second Gulf war of 2003, started new era of re-flooding, encouraging marsh refugees, who kept cattle and sheep while in Diaspora,

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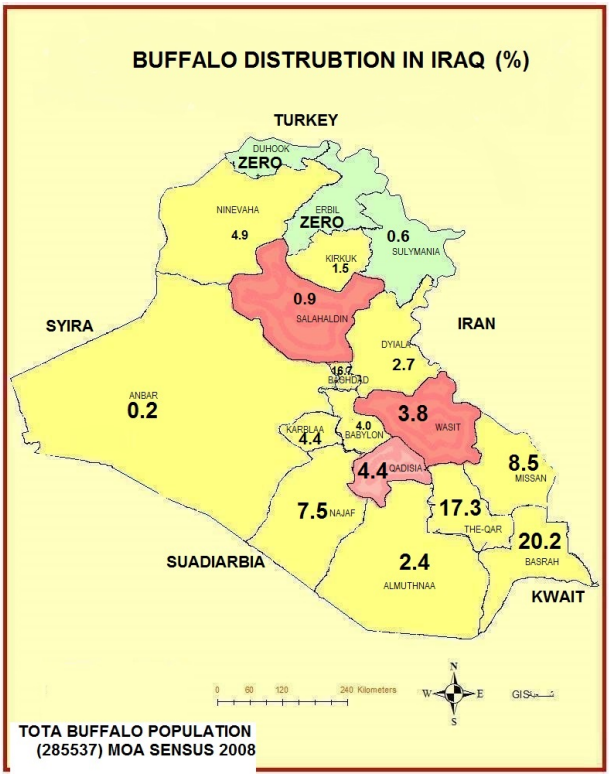
often sell them and purchase water buffalo as soon as they resettle around the restored marshes (New Eden Group, [9]).



Map 1: (MOA, Census, 2008. Baghdad, Iraq).

Buffaloes mainly concentrated in the buffalo triangle between marshes, located at three southern governorates in Basra, The-Qar and Missan as well as dairy buffalo colonies around the capital and middle – Euphrates region with less density in Northern part of country (Map **1** and Table **1**).

Archeological remains of cylindrical seals and ivory materials were discovered in Ur at Royal cemetery especially the black marbled seal contains artifacts depicting Gilgamesh with water buffaloes in the rivers of the Tigris and Euphrates with typical crescent horn of Swamp buffalo [10] (Figure **1**, cylinder Seal of Shar-Kali –Sharri, King of Akkad, Mesopotamia, C.2340-2100 B.C (Black Marled) (collection, Louvre, Paris, France 326).

We have many theories based on these archeological remains and history as fellow.

1 Cockrill [11] theory. "In prehistoric times before writing, Wild buffaloes may have lived in Mesopotamia, while in the Pre-Christian centuries there may be movements of domestic animals from the Indus Valley.

2 Zeuner, [12] theory. "It is conceivable that the Indian buffalo, existed wild in Mesopotamia through there is no positive evidence to this

Table 1: Water Buffaloes Distributions In Iraqi Provinces (Ministry of Agriculture Census 2008)

Districts	Province	Immature males	Immature females	Total of immature	Mature males	Mature females	Total of mature	Total	%
Southern Mesopotamian marshes	Basra	8297	11546	19843	2590	35271	37861	57704	20.2
	Thi-Qar	6836	10498	17334	2679	29270	31949	49283	17,3
	Missan	3371	5023	8394	1228	14723	15951	24345	8,5
Capital and central region	Baghdad	6434	10243	16677	1812	29320	3113	47809	16.7
	Wasit	1351	2086	3437	527	6785	7312	10749	3,8
Middle Euphrates area	Najaf	3022	5029	8051	1203	12049	12352	21303	7.5
	Qadisia	889	2136	3025	415	9049	9464	12489	4.4
	Karbala	1724	3180	4904	741	7018	7759	12663	4.4
	Babylon	1543	2345	3888	535	6973	7508	11396	4,0
	Muthana	828	1289	2116	346	4501	4847	6963	2,4
North region	Diala	1006	1628	2634	277	4948	5225	7859	2,7
	Mosul	2028	2832	4860	300	8801	9101	13961	4,9
	Karkuk	489	1009	1489	231	2466	2697	4195	1,5
	Tikrit	279	592	871	181	1626	1807	2678	0,9
	Anbar	58	134	192	29	321	350	542	0,2
Kurdistan	Sulaimania	256	430	686	41	871	912	1598	0,6
	Erbil	-	-	-	-	-	-	-	-
	Dohuk	-	-	-	-	-	-	-	-
	Iraq	38410	60000	98410	13135	173992	187127	285537	100

Figure 1: Cylinder Seal of Shar-Kali –Sharri, King of Akkad, Mesopotamia, C.2340-2100 B.C (Black Marled) (collection, Louvre, Paris, France 326).

effect, some workers such as Hilzheimer and Sliiper take this for granted and the former goes so far as to say that the buffalo was the first wild bovine to become extinct in Mesopotamia on the other hand, it is equally conceivable that domestic buffaloes had been introduced from India.

3 Sousa, [13] theory, "Mesopotamian buffaloes were brought to Iraq from Indian subcontinent in the eras of second millennium B.C, based on archeological seals (Figure **1**).

4 Encyclopedia of Egyptian Buffalo [14] mentioned in literature, not seen in artwork of the ancient Egyptians, Romans, or Greek to whom they were apparently unknown. it was not until about 600 A.D., that Arabs brought the animal from Mesopotamia and began moving it westward into the Near East, pilgrims and crusaders returning.

MOLICULAR GENETICS STUDIES

Developing in molecular genetics studies will appeared to throw light on these archeological evidences, there are three recent DNA basis studies as fellow:-

Iraqi Microstallittes Genetics Study (1)

Showed that, Iraqi buffalo originated in Iraq, not imported from India as Indian theory claimed. And there are three main clusters: the first one included Basra, Baghdad and Al-Qadisyia the second included Kirkuk and Missan while the third included Babylon and Mosul, with highest polymorphism.

Indian Molicular Genetics Study (2)

Showed that the Data are consistent with the available archeological information in supporting the proposition that the river buffalo was likely to be domesticated in the western Region of the Indian subcontinent, in addition we found obtained time estimate of 6300 years BP for the expansion of one set of heliotypes of the Indian domestic buffalo.

Italian Molicular Genetic Study, 2011 (3)

A according to results indicate that the introduction of water buffalo breeding and rice farming, most likely from the Indian subcontinent, only marginal by affected the gene pool of autochthonous people of the region furthermore, a prevalent middle eastern ancestry of the modern population of the marshes of southern Iraq implies that if the Marsh Arabs (Ma"dan) are descendents of ancient Sumerians, also the Sumerians were most likely autochthonous and not of Indian or south Asian ancestry.

CONCLUSIONS

The Indian and Italian molecular Genetic studies [2, 3] were supported the archeological theory of Sousa [13] that our buffalo was Indian subcontinent origin, while recently microsatellites Iraqi Jaayd [1]. Theory of Iraqi buffalo originated in Iraq, not imported from India, supporting the two archeological theories of Cockrill and Zeuner [11, 12] but we need phylogeographic study to estimate the duration of buffalo domestication and the exact home tract that was come from?? Still an open question till we will doing more researches in Future.

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