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(Working Group on Geographical Names as Cultural Heritage)

Significance of place names in the distribution of wildlife species and their benefits in the reintroduction process

Submitted by Saudi Arabia**

Summary:

Most place names are derived from the name of a person, animal or plant. Researchers can know the current status of natural and human environments because they can record events and conditions through direct observation and real-time data collection and reporting. However, understanding past environmental conditions is a difficult task that requires an analysis of the legacy of species that once roamed that environment. One of the most important of these legacies, created by human beings, is place names, which play an important role in the identification of ancient environmental conditions. Place names document the existence and areal extent of species as well as the state and contents of such environments and their relationships to human activities. Place names also make it possible to gain insight into the ancient climate and the plant types and water resources that prevailed within that environment.

The documentation of place names and determining their locations are very important, particularly given the decreased public interest in the subject. Previous generations had a thorough knowledge of everything pertaining to the desert land of Saudi Arabia. They observed it, described it and named its places and features.

As these names still exist without change, they have been used, to the extent possible, to pinpoint the past distribution of wildlife species, beginning with those species that are extinct and followed by those that still exist in small numbers despite the shrinkage of their former habitats. The report provides evidence of the benefits accruing from the use of place names to ascertain the former distribution of natural fauna. That knowledge can contribute to the success of the reintroduction process for such fauna.

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*Prepared by Abdullah Nasser Alwelaie, National Committee on Geographic Names, in the Kingdom of Saudi Arabia

Preface:

The natural Fauna and Flora in the Kingdom of Saudi Arabia (KSA) belong to communities that were originally derived from African, Asiatic and European sources, but have evolved in the Arabian Peninsula for a long period of time. There are evidence that some species of wildlife had established themselves here millions of years ago due to the location of Arabia at the junction of African, Asiatic and European continents long before the geological creation of the Red Sea rift more than 38 million years ago. Meanwhile, the Arabian Gulf maintained its connection with the Indian Ocean, while large parts of northern, central and southern Arabia were submerged under sea, an event which is substantiated by the presence of marine fossils, such as shells, coral reefs and oysters.

Plant community in the KSA for the most part is distinguished by its meager biodiversity compared with humid environments. However, the southwestern part of the country enjoys a relatively humid climate due to a reasonable quantity of rainfall it receives, and, therefore, has a denser plant cover that are related to African species. The origins of plant species found in northern KSA are of a Mediterranean origin due to contact that existed, during ancient geological times, between the Anatolian Plateau and the mountainous parts of the Hejaz. The fauna that presently exists in Arabia is also distinguished by their existence in either solitary mode or in small groups that move about from place to place in search of food, the availability of which is controlled by the amount of rainfall and forage.

It is highly probable that some of the animal species that inhabited Arabia are of African origin, such as the striped hyena (*Hyena hyena*) that lives in rough mountainous areas, and the Arabian Oryx (*Oryx leucoryx*) that roams the open steppes; the Arabian Panther (*Panthera pardus*) that inhabits rough mountainous areas; and monkeys (*Papio hamadryas*) that exists in southwestern Arabia. However, long isolation period has generated a set of species of these animals that are now particular to Arabia, having been acclimatized to its environmental conditions. Other animals that had existed but now extinct we find the lion (*Felis leo*), the leopard (*Acinonyx jubatus*), both of African origin. There are other evidence that indicate a history flourished with wildlife in Arabia, especially in the KSA. One finds their rock inscriptions in many parts of KSA. They indicate that the environments of the KSA were rich grasslands with diverse fauna. Some of these animals are now extinct; such as wild oxen (*Oxen*), and zebras or asses (*equus hemippus hemippus*), while some of them still exist, such as the Arabian Oryx (*Oryx leucoryx*), ibex (*Capra ibex*), and wolves (*Canis lupus*). The Arabian peninsula is also considered as an important home of the gazelle genus, five species of which have been identified in this area. One of the rare species of this genus lives exclusively in the KSA. i.e. the Farasan gazelle (*gazella gazella farasani*). It is believed that the ‘Afri gazelle (*Gazella dorcas saudia*) had become extinct, while reem gazelle (*Gazella subguttorosa*) still exists in the sandy desert of the Empty Quarter and

Khunfah reservation, and the idmi gazelle (*Gazella gazella*) that still survives among the rocky and mountainous parts of the central of the Kingdom of Saudi Arabia.

The onset of the dry desert climate in Arabia with high temperatures and low rainfall, has led to a scarcity of plant cover and the disappearance of rich savanna grasslands which eventually resulted in an increased rate of desertification. The process of decreasing natural pastures and tree plant cover, and the concomitant formation of sand dunes and sand encroachment, have led to the disappearance of many natural forms of lives that were unable to adapt to the harsh dry prevailing climatic conditions. However, some species managed to survive by adapting physiologically and behaviorally to these harsh conditions, such as gazelles, the Arabia oryx, ibex, wolves and hyenas, etc.

The Fate of wildlife:

All forms of wildlife in Arabia had been exposed to harsh conditions and hunting that led to extinction in some cases, and to a sharp decrease in number to the verge of extinction for others. Of the big birds that have become extinct, the Arabian Ostrich (*Struthio camelus syriacus*), which disappeared from its natural habitat 80 years ago. The Arabian Ostrich constituted one of the important wildfowls that supplied people of the desert with enough meat and eggs, in addition to using the egg shells as crockery and containers.

Man had made use of his natural environments for millennia in order to satisfy his basic needs but without over-exploitation because of his limited ability to chase big game. However, the advent of automatic machine guns after WWII and the four-wheel-drive cars has caused detrimental effects to wildlife, a consequence of which still prevail until nowadays.

Bustards (*Chlamydotis undulate*) have witnessed a sharp decrease in their numbers, as well as a shrinkage in their habitats together with the Arabian partridge. Many species of mammals had become extinct, such as the Asiatic lion (*Felis leo*), and the hunting leopard (*Acinonyx jubatus*) the last one existing in the Kingdom of Saudi Arabia being killed in the early fifties of the twentieth century. The Arabia Oryx (*Oryx leucoryx*) has also disappeared from its natural habitat, as well as the ʻAfri gazelle (*Gazelle dorcas saudiya*), while the Arabic panther (*Panthera pardus*) is on the verge of extinction.

There are other species that show a large decline in their numbers to such extent as to make natural reproduction in the wilderness, as well as maintaining their hereditary composition to subsequent generations quite difficult. Such species include reem gazelle (*Gazella subguttorosa*) that inhabit the sandy areas of the north of the Kingdom of Saudi Arabia; idmi Gazelle (*Gazella gazella*) that lives in the mountainous regions of central and northern of the Kingdom of Saudi Arabia; as well as the mountain ibex (*capra ibex*), wild cats (*Felis spp*.) and the Arabian wolf (*Canis lupus*).

In contrast to this situation, Monkeys (*Papio hamadryas*) has witnessed a rapid increase in its numbers, and has adapted well to the new distribution of human population,

especially in the southwestern part of the KSA. This is due to the availability of food in urban environments, and the eradication of its two traditional enemies that prey on them: the Arabic panther and hyenas.

Place Names:

If the status of the present natural and human environments are easily accessible for a researcher to record events and conditions through direct observation and live report of what is actually available, dealing with past environmental conditions is a difficult task that needs an analysis of the legacy of those species that had inhabited those environments, whether human, plant, or an inanimate body. One of the most important legacies invented in this respect by human beings is place name. Place names, certainly, play an important role in the identification of ancient environmental conditions.

However, studying place names for such purposes can pose some problems such as:

1 – It is difficult, if not impossible, to determine the exact date of the initial existence of the named item, whether it was an animal, plant, or a surface feature.

2 – It is also challenging to decide on what some place names mean, e.g. ʻArʻar (a name of a town), is it named after ʻArʻar plant (an Arabic name for Juniperus sp.) which, as botanists confirm, cannot grow there at all because of unsuitable environmental conditions; or is it after something else. Likewise there is the name Ar Rail, is it after the well-known plant of rail, or a young gazelle?

3 – It is hard to determine the limits of the zone indicated by the name. This arises from the doubt of the significance of such a name. Does it indicate the presence of the named object and its diffusion in the area, or was it named in commemoration of an event related to it. For example, when we consider a place in Nafud Qunaifidhah called "Khubaib Ar Rīm", the first question that comes to mind is, was the presence the reem gazelle so extensive in this area as to deserve this name? Or is it because of an incident associated with hunting of a single reem gazelle in this place? In which case, the name is celebrating the hunting event and does not illustrate wider distribution of an animal.

4 – Place names change overtime. Many old place names in the KSA had changed and have been replaced by new names with which many people, except some interested researchers, are familiar. The following table shows some of such names:

Old Name	New Name
AL BAḤRAIN	AL AḤSĀʼ
YATHRIB	AL MADĪNAH AL MUNAWWARAH
RAML ʻĀLIJ	AN NUFŪD AK KABĪR
RAML AD DIBīL	NUFŪD AD DIḤĪ
RAML ʻABD ALLAH IBN KILAB	ʻURŪQ SUBAYʻ

WĀDĪ AL WITR	WĀDĪ AL BAṮḤĀ’
WĀDĪ ‘UQAIL	WĀDĪ AD DAWĀSIR
ḤAJR AL YAMMAMAH	AR RIYĀḌ

It is worth noting that most names are usually tied to a name of a person, an animal, a plant, or something else. The status of the present natural and human environments are readily accessible by researchers to record events and conditions through direct observation and live reporting. However, dealing with past environmental conditions is a much difficult task that needs analysis of the legacy of those species that once roamed that environment. In this respect one of the most important legacies created by human beings is place names. Place names, certainly, play an important role in the identification of ancient environmental conditions. Place names document species existence and areal extent, as well as depict the state and contents of such environments, and their relations with human activities, One can also know ancient climate that had prevailed within that environment as well as type of plants and water resources.

Conclusions:

Place names location and documentation are very important, especially in this age which is witnessing a noticeable decrease in the number of interested people. Fathers and grandfathers thoroughly knew everything pertaining to the desert land of the Kingdom of Saudi Arabia. They observed, described and gave its place names and features.

As these given names still exist without change, I have tried to pinpoint past distribution of wildlife species using the location of place names, beginning with those species that are extinct followed by those that still exist but with small numbers despite shrinkage in their former habitat. The study shows evidential benefits accruing from using place names for former distribution of natural fauna. This knowledge can contribute to the success in the process of their reintroduction.

I urge everyone to follow suit and write research on the benefits of place names in the knowledge of the natural environments and its constituents.

Examples:

In the following I will show examples of place names pertaining to wildlife in order to ascertain their importance to the knowledge of their past distribution. I will only present names for the leopard with their distribution on a map. The rest of examples I will show the distribution maps.

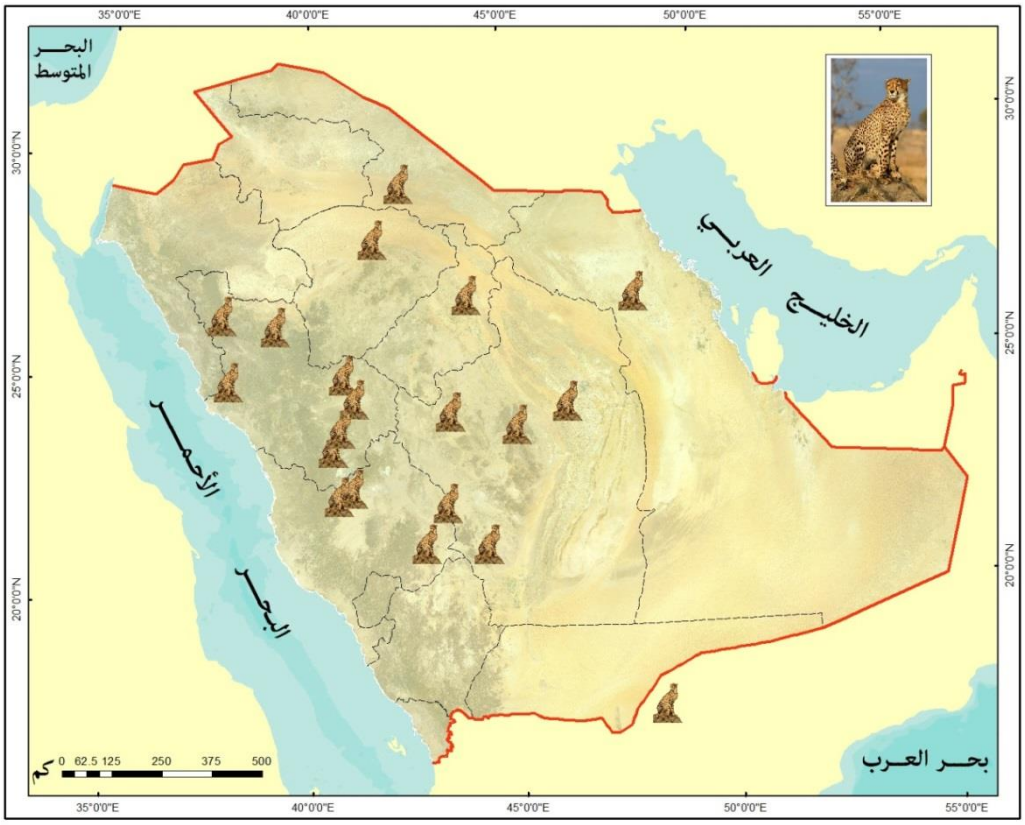
1- Place names that are named after Al Fahad "leopard" (*Acinonyx jubatus*):

Arabic Name	Romanization	Feature type	Longitudes			Latitudes			District
أبرق فهد	**ABRAQ FAHAD**	أبرق	43	55	0	26	51	0	البطين

مشاش ابن جمعة	0	45	26	0	4	48	أبرق	**BARQĀ' AL FAHADAH**	برقاء الفهدة
رنية (شمال	10	18	21	20	46	42	جبل	**BARQĀ' AL FAHADAH**	جبل الفهدانة
المزاحمية	20	24	24	20	18	46	جبل	**JABAL AL FAHADAH AD DINYĀ**	جبل الفهدة الدنيا
المزاحمية	0	23	24	0	18	46	جبل	**JABAL AL FAHADAH AL QUṢYĀ**	جبل الفهدة القصيا
شعيب غيلان	0	13	26	12	7	39	جبل	**JABAL AL FAHADĪYAH**	جبل الفهدية
خور الداب	0	24	29	0	17	42	رجم	**RIJM FAHAD**	رجم فهد
جبال العميرة	0	7	25	20	48	40	أبرق	**ABRAQ AL FUHŪD**	أبرق الفهود
شقاق البتر	0	33	17	0	18	48	رمل	**AL FUHŪD**	الفهود
جبال القرمصية	0	12	22	25	18	43	أبرق	**BURQ UMM AL FUHŪD**	برق أم الفهود
قصيب أبو سيال	20	27	26	15	48	37	أبرق	**BARQĀ' AL FUHŪD**	برقاء الفهود
الغمر	0	31	23	0	32	40	أبرق	**BARQĀ' AL FUHŪD**	برقاء الفهود
جبل رمرم	0	30	23	0	32	40	أبرق	**BARQĀ' AL FUHŪD**	برقاء الفهود
آبار الجبو	0	35	24	0	4	41	أبرق	**BARQĀ' AL FUHŪD**	برقاء الفهود
آبار أبو كعب	25	15	21	0	15	44	جبل	**JIBĀL UMMAHĀT AL FUḤŪD**	جبال أمهات الفهود
جبل عليق	25	15	21	0	16	44	جبل	**JIBĀL UMMAHĀT AL FUHŪD**	جبال أمهات الفهود
مقر شنيف	0	34	22	0	1	41	جبل	**JABAL UMM AL FUHŪD**	جبل أم الفهود
بدائع العضيان	20	15	24	0	25	43	جبل	**JABAL UMM AL FUHŪD**	جبل أم الفهود
الجمانيه	0	15	24	0	26	43	جبل	**JABAL UMM AL FUHŪD**	جبل أم الفهود
القويع	0	55	23	0	2	45	جبل	**JABAL UMM AL FUHŪD**	جبل أم الفهود
الهرارة	5	55	23	0	44	40	جبل	**JABAL AL FUHŪD**	جبل الفهود
آبار المسلح	15	23	22	20	40	40	حرة	**ḤARRAT AL FAHŪD**	حرة الفهود
حراض	0	58	24	0	58	37	حلاة	**ḤULAYY AL FUHŪDĪ**	حلي الفهودي

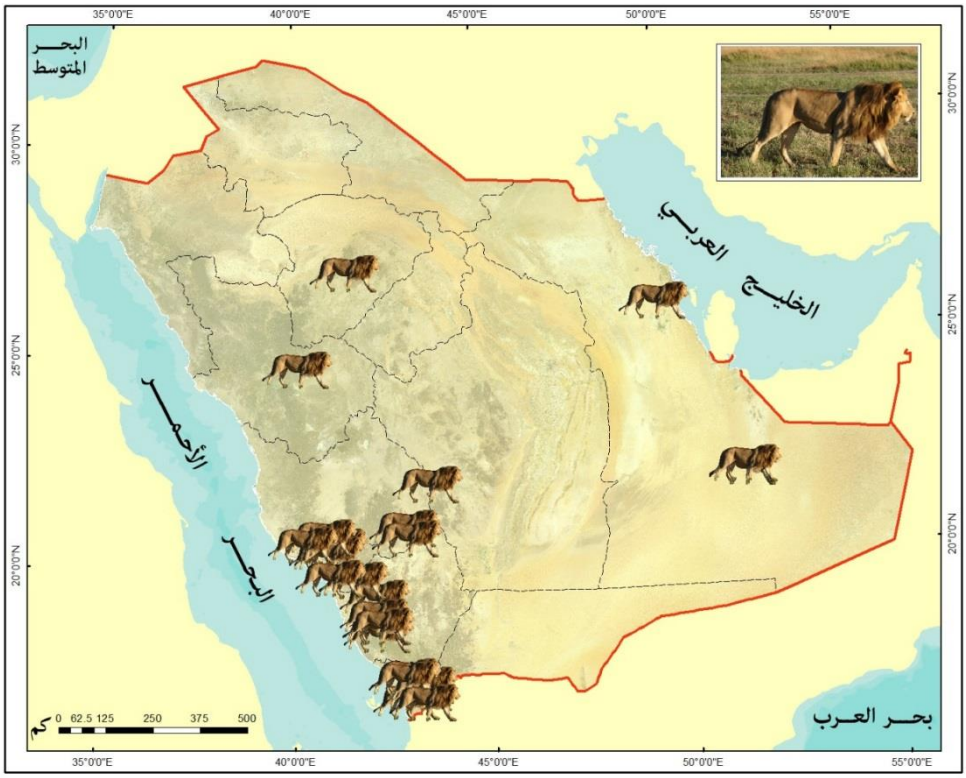
خب الفهود	KHABB AL FUHŪD	خب	41	35	0	28	9	2	بئر الجفر

Map Depicting these place names of the leopard:

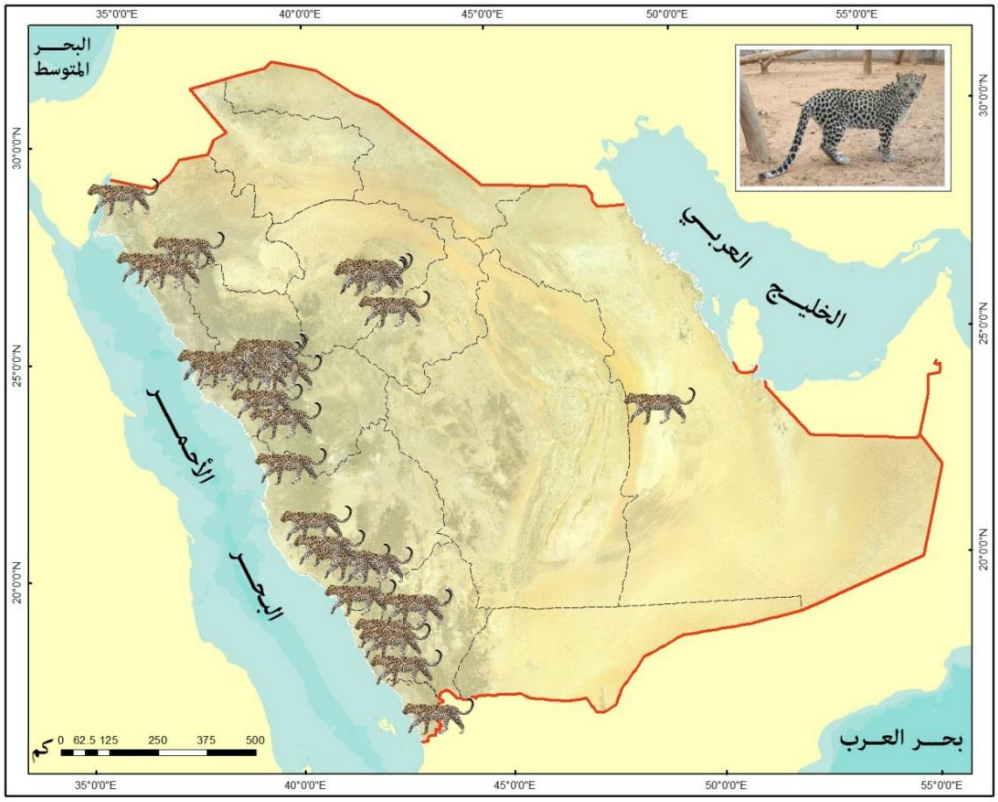


Other maps:

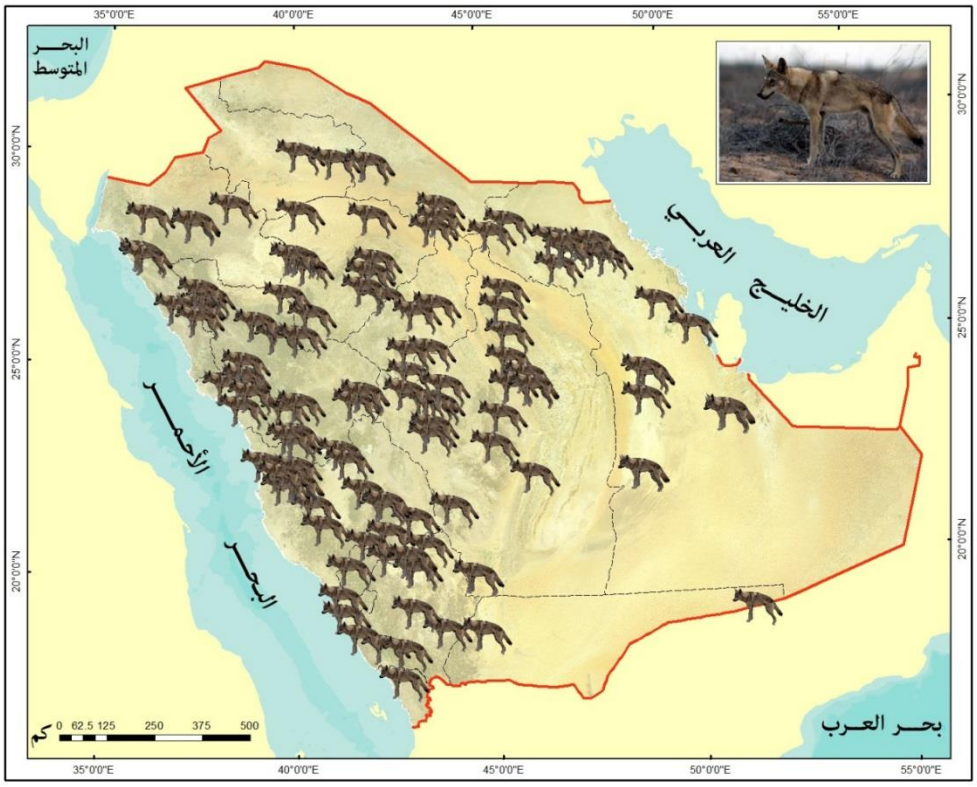
2- Map depicting place names of lions (*Felis leo*):



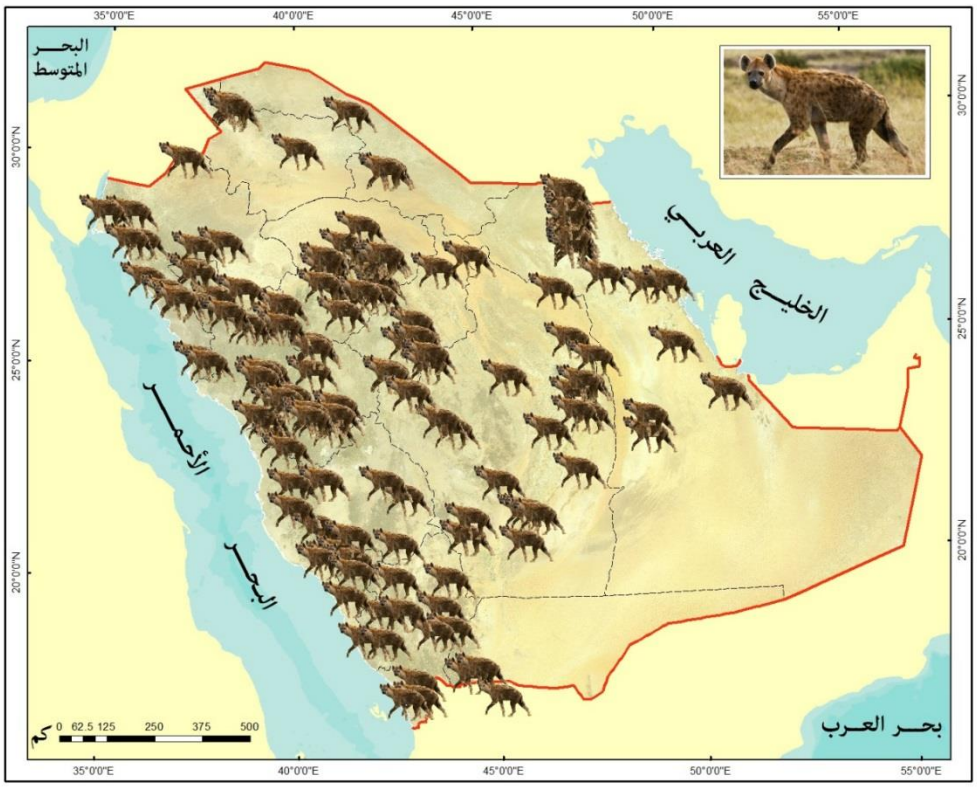
3- Map depicting place names of Arabian panthers (*Panthera pardus*):



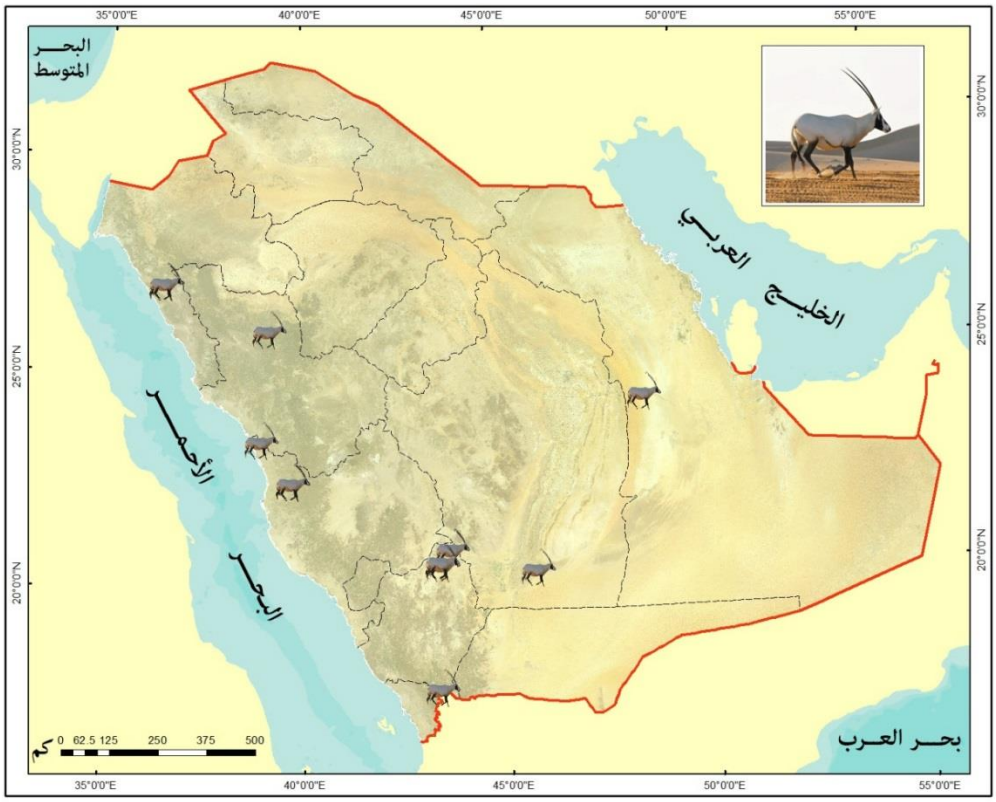
4- Map depicting place names of wolves (*Canis lupus*):



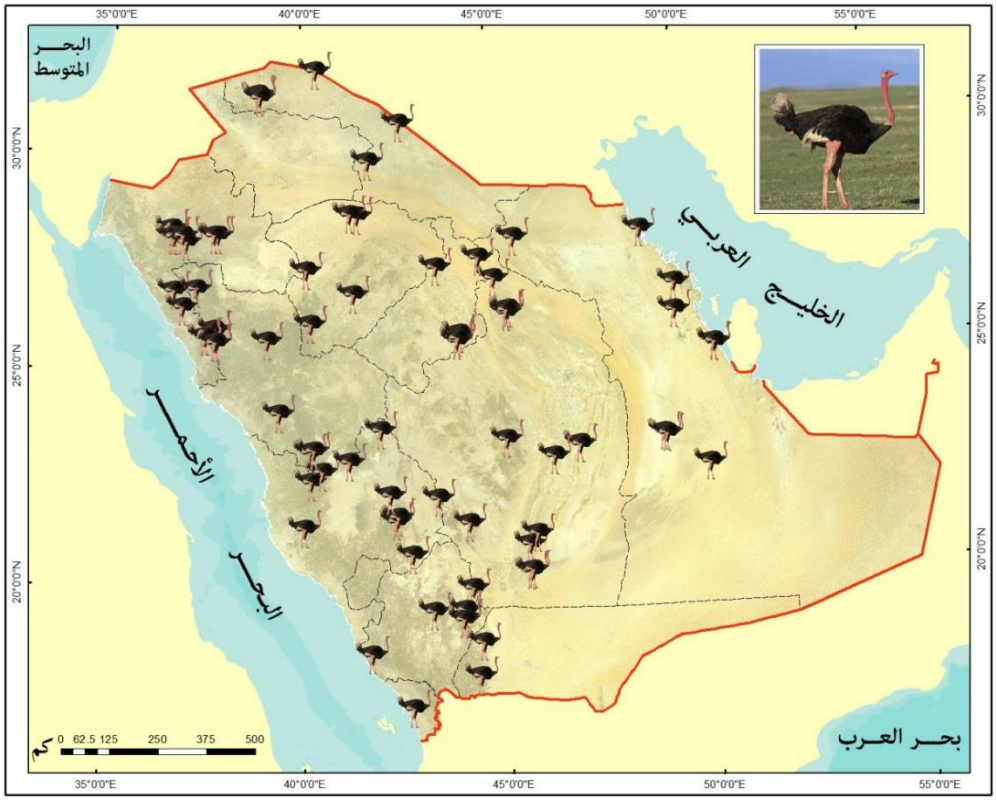
5- Map depicting place names of hyenas (*Hyena hyena*):



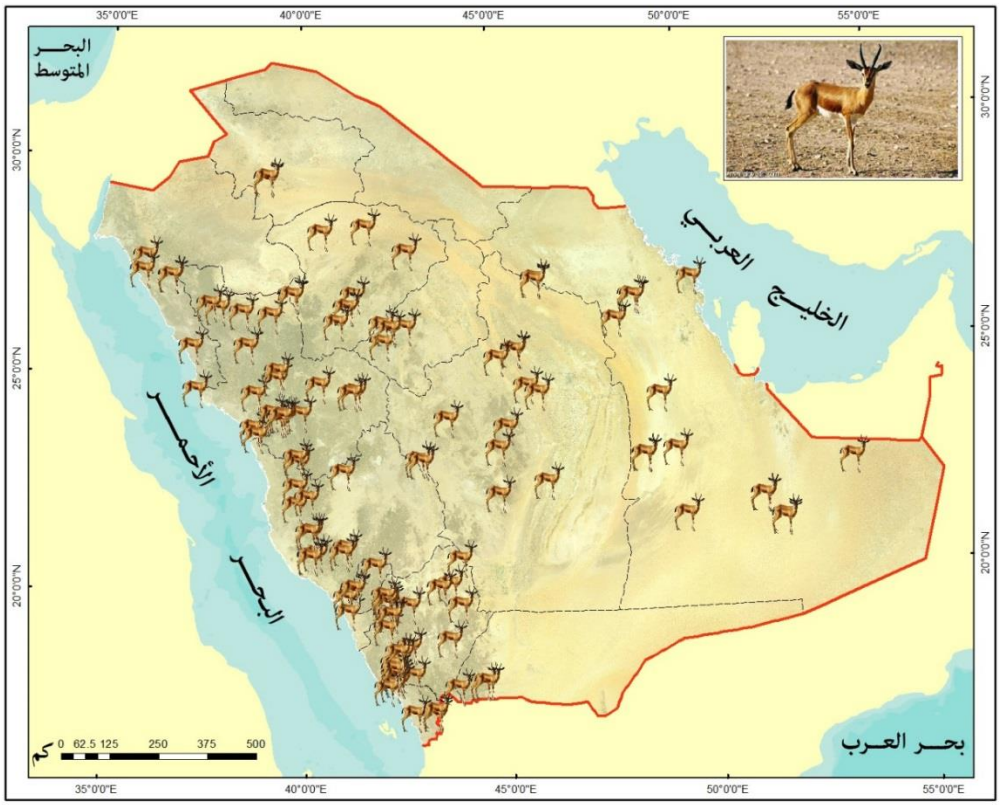
6- Map depicting place names of Arabian oryx (*Oryx leucoryx*):



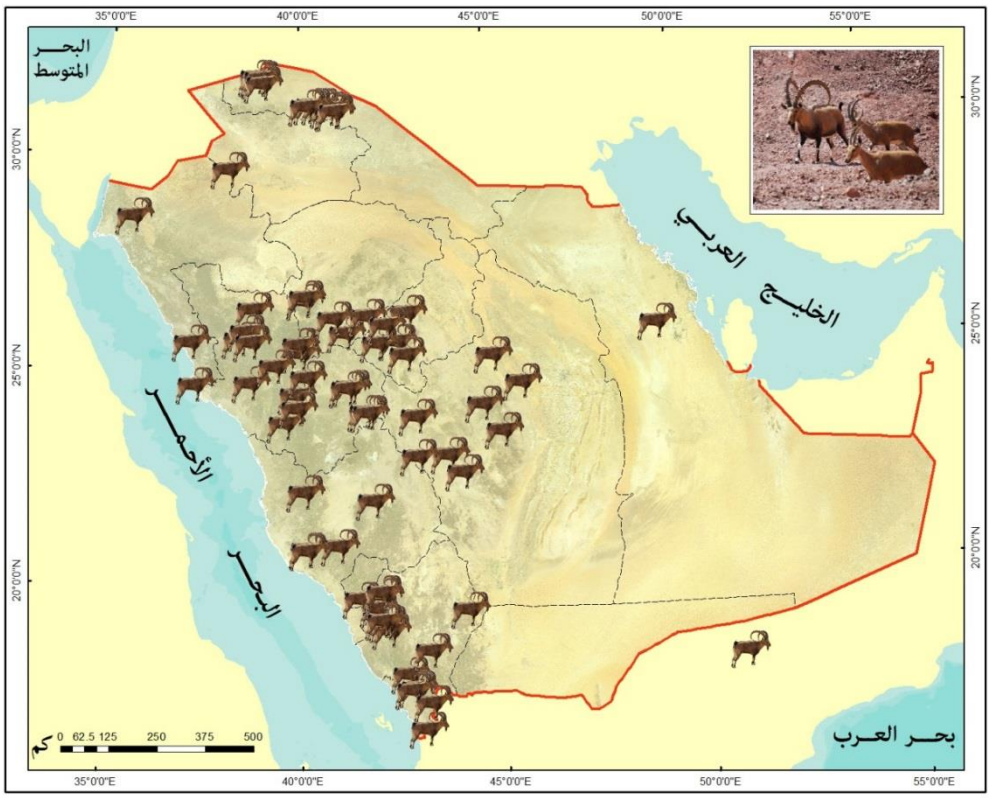
7- Map depicting place names of Arabian ostriches (*Struthio camelus syriacus*):



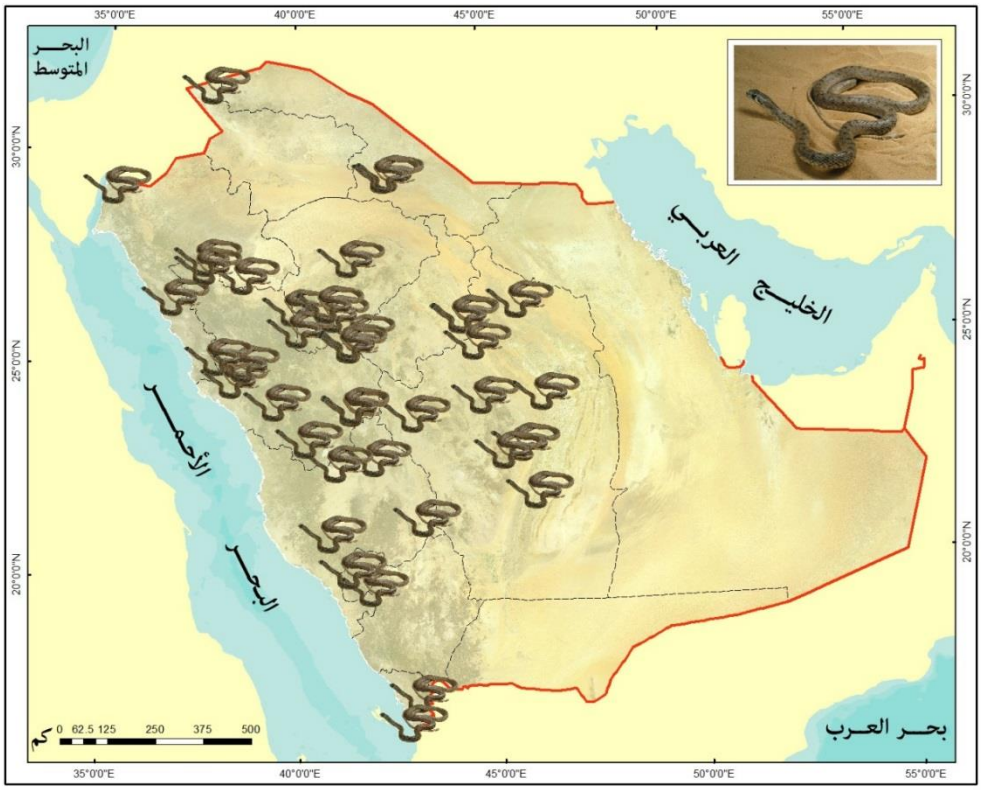
8- Map depicting place names of the gazelles *(Gazella spp.)*



9- Map depicting place names of the ibex (*Capra ibex*):



10- Map depicting place names of the snakes (34 species):



11- Map depicting place names of lizards (*Uromastix aegyptius*):