

ABSTRACT

BEDOUIN SETTLEMENT IN THE MIHMAL AREA OF SAUDI ARABIA

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ABSTRACT

The Mihmal area, central Saudi Arabia, has several agricultural villages which represented the entire settlement pattern for hundreds of years. These old villages were augmented by few settlements of nomadic (Bedouin) origin early in this century. The earliest Bedouin settlement was established about 1915 (Early Hijar). There are five such settlements in the study area. There are two Bedouin settlements which were built in 1958 and 1973 (Recent Hijar). The area lacks any urban center and, thus, no Hilal were created, *i.e.*, Bedouin settlement in urban centres.

Field research indicated that Bedouin settlement in the Mihmal district generally fits the model of Bedouin

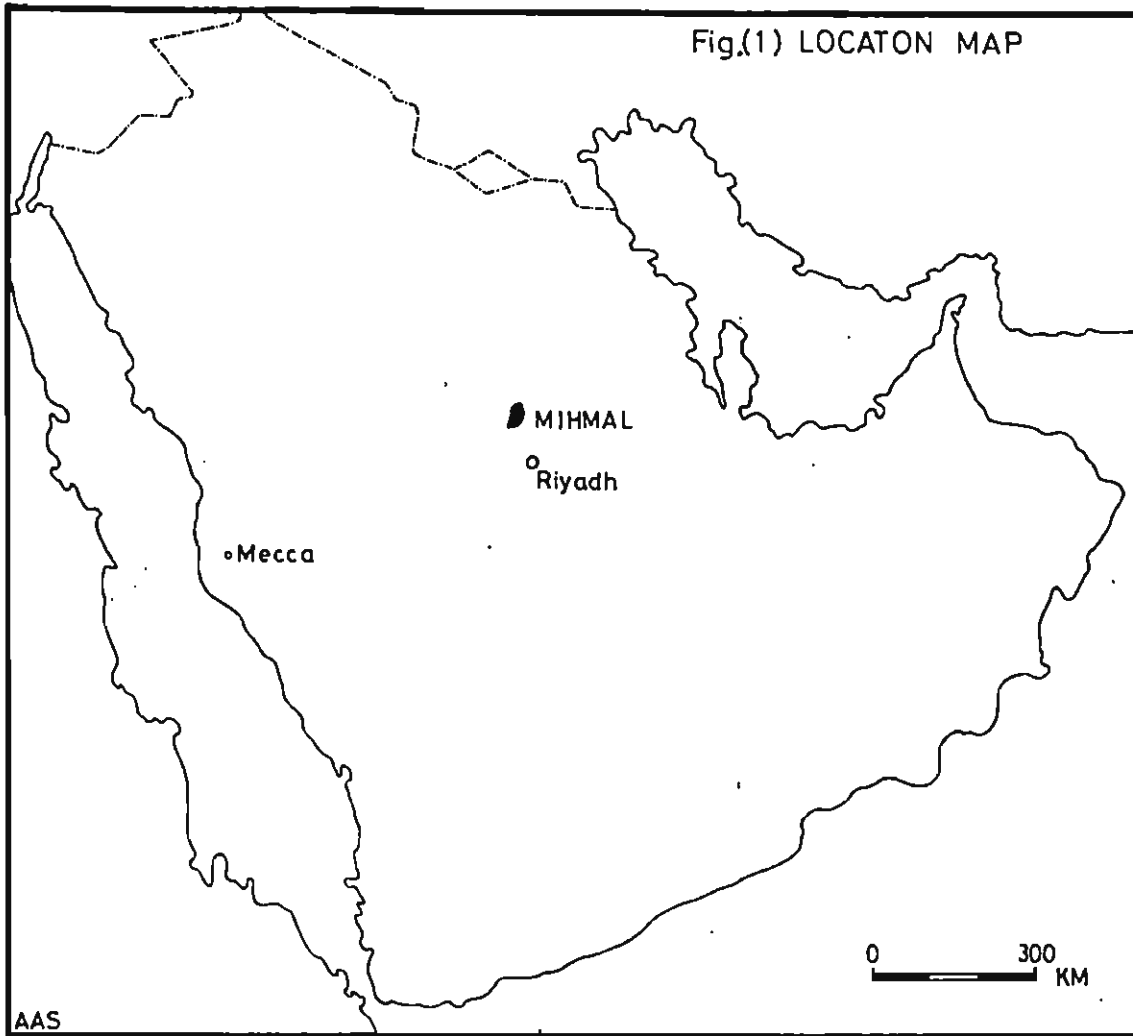
settlement in the country. There are some differences, however, between Bedouin settlement in the Mihmal and other areas. Some of these differences are due to the innate characteristics of Bedouin settlements, while other differences are caused by the Mihmal's resources and location.

This paper attempts to throw some light on the nature and scope of Bedouin settlement in the Mihmal district of central Saudi Arabia. The geographic knowledge about the topic and the area are very limited. This study is the result of field work in the area in 1978 and 1979. Field interviews were conducted with village headmen and elders about their settlements. Data was also gathered by means of direct field observations.

The Study Area :

The Mihmal district is one of the dozen districts that comprise the Najd, or central Saudi Arabia. It is located about 150 kilometers north of the capital city of Riyadh (Figure 1). The Mihmal is not very large in size and roughly equals 4000 square kilometers. It is bounded by Wadi Huraymala in the South and Wadi Al Atak in the north. The Tuwayq Escarpment borders the area in the west and the Urma Escarpment is located in the eastern edge of the area. The most prominent physical feature of the Mihmal is the Tuwayq Escarpment. From the Tuwayq several Wadis descend east and west and that is where we find most settlements.

Fig.(1) LOCATON MAP



The Mihmal is a rural area with small size villages. According to the Census of Population of 1974, there were a total of 28 settlements with a total population of 5987. The average population per settlement was only 131 persons if we exclude Thadiq (Table 1). The largest settlement is Thadiq with a population of 2449. It serves as the administrative seat of the area and has governor (amir), municipality, court, police, schools, clinic, post office and telegraph and a passport office. The trade and service functions in Thadiq are limited to few grocery, bakery, clothing, repair and other service shops. Thadiq lacks more extensive functions because it lies within the trade zone of Riyadh. The city of Riyadh is located within a driving distance of about 150 kilometers and is reached via two praved roads. Therefore, the Mihmal district depends on Riyadh for trade, services and employment to a large extent. It is estimated that as much as 70 percent of the area's population have migrated to Riyadh.

Table (1)
Population in the Emirate or Thadiq

<i>Settlement</i>	<i>Number of Villages</i>	<i>Population</i>			
		<i>Sedentary</i>	<i>Nomads</i>	<i>Percentage of nomads</i>	<i>Total population</i>
Thadiq	15	3503	450	11.38	3953
Duqlah	2	56	57	50.40	113
As Suferrat	1	500	0	0	500
Ar Raghbah	8	593	438	42.48	1031
Al Bir	2	390	0	0	390
Total	28	5042	945	15.78	5987

Source : *Population Census*, 1974.

*Calculated by the author.

The Mihmal district is not famous for its extensive agriculture and settlement. Adequate underground water is found only along major wadis and it fluctuates according to rainfall. Settlement did flourish, however, on a modest scale for hundreds of years. Thadiq, for example, was founded three hundred years ago by migrants from Al Bir, a nearby village. Most of the residents are descendents

from the Dawasir tribe. Descendents of the Dawasir tribe are the majority in most of the old villages. Descendents of the Subay tribe predominate in Ar Raghbah. Therefore, these old villages (traditional settlements) were established by nomads or former nomads. The same phenomena accrued in most parts of Saudi Arabia. Thus, there is a strong link between old settlements and more recent Bedouin settlements (Hijar).

Bedouin Settlements in the Mihmal

Field research indicated that Bedouin settlement in the area occurred in two different periods. Some Bedouin settlements (Hijar) were established in the twentieth century and are called "Early Hijar".⁽¹⁾ Other Bedouin settlements were built in a latter date and are labeled "Recent Hijar,".

Early Hijar

Bedouin settlement in the area began early in this century when Al Hisi was established in 1915. The earliest Bedouin settlement of this type in Saudi Arabia was built in 1912. In another study, this writer termed these Bedouin

1. The term *hijar* (Plural) means Bedouin settlements, while the term *hijrah* (singular) means a single Bedouin settlement. In Arabic *hijrah* also means migration.

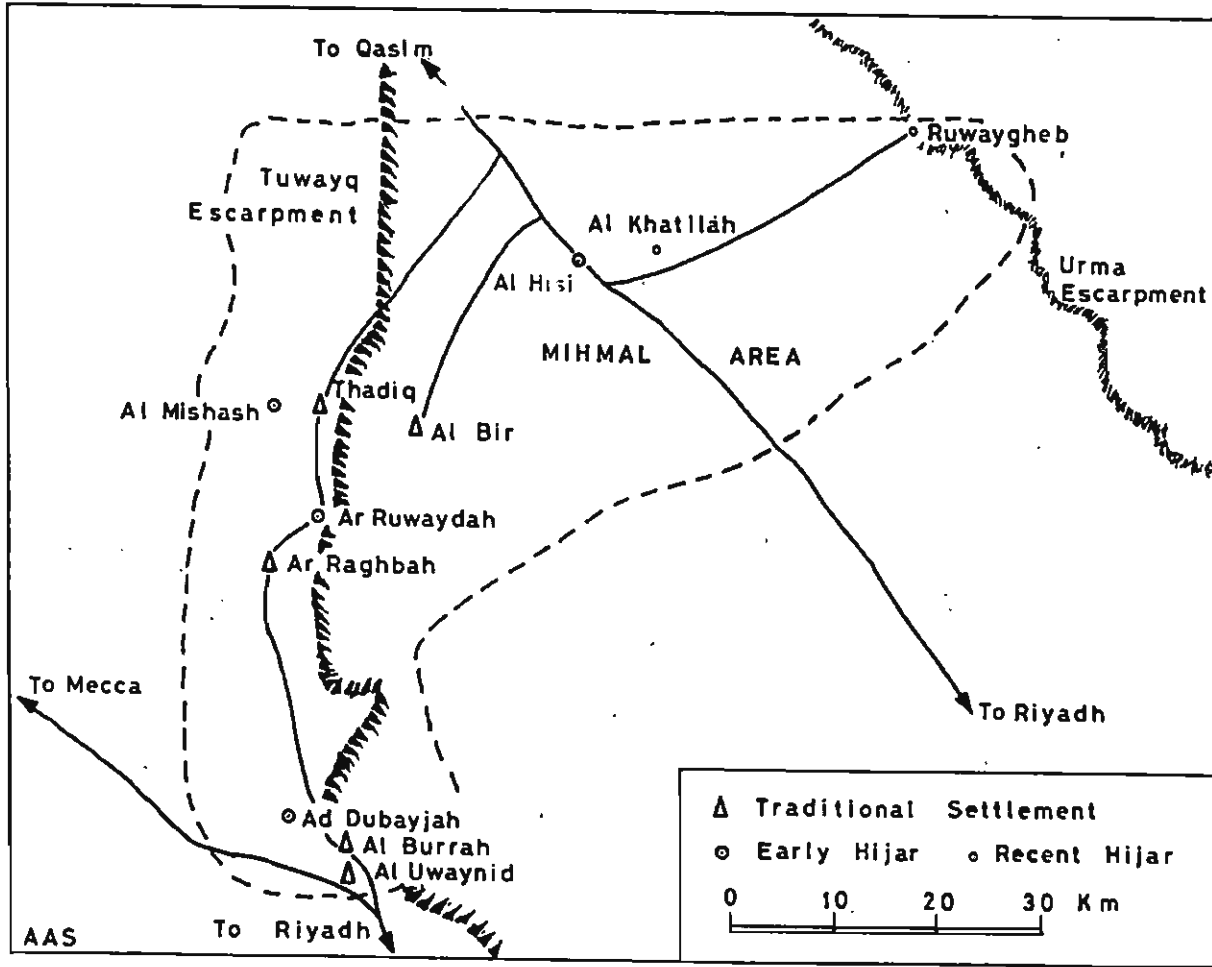
settlements as the "Early Hajar", and found them to be "induced Bedouin settlement in rural areas."⁽²⁾

They resulted from King Abdul Aziz Ibn Sauds, founder of Saudi Arabia, plan of sedentarizing the nomads in permanent villages. This was accomplished when the nomads joined the Ikhwan religious reform movement. Hundred of Bedouin settlements were established in various parts of the country. A total of five Bedouin settlements of the Early Hajar type were identified in the study area. They were established between 1915 and 1929. This conforms to the same period as the rest of the country, where establishment of the Early Hajar began in 1912 and ceased about 1930 (Figure 2).

2. Ahmed A. Shamekh, *Spatial Patterns of Bedouin Settlement in Al-Qasim Region, Saudi Arabia*. Lexington, University of Kentucky, 1975, p. 100.

Fig. 2 SETTLEMENT IN THE MIHMAL AREA

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All the Early Hijar in the Mihmal were established by Bedouins who came directly from Nomadism. The only exception is the village of Ar Ruwaydah (Itban) where residents came from Al Ghutghut, a major Utayba tribe settlement some 100 kilometers to the southwest. There is a surprisingly varied tribal origin of the settlers. Five tribes are represented : Suhul, Subay, Utayba, Qahtan and Rashayda. The predominant tribe in the area, however, is the Suhul tribe which comprises the majority of residents in three of the five Early Hijar. The Subay tribe has a majority in Al Hisi village. The Utayba tribe is dominant in Ar Ruwaydah (Itban). The remaining two tribes are represented in small numbers.

Site selection for settlement was carried out by the settlers themselves with the amir (headman) playing the leading role. Water and grazing resources were the most important factors for selecting a settlement site. The settlers acquired the land by government grants. Bedouin villages received land grants of varying sizes but the mean equalled about 100 square kilometers. The original settlers came in large numbers often of several clans. Consequently, these villages were built rapidly.

The people's occupations vary with settlement. In Al Hisi, Al Mishash and Dubayjah, agriculture is not important and the population is engaged in semi-nomadism.

Semi-nomads were defined by the author as "those Bedouins who spend most of the year in the settlement but take livestock (mostly sheep) and go to the desert during the winter grazing season. There, they stay an average of three months."³ The settlers also work in government employment such as in schools and police. Some residents of Al Hisi work in highway oriented services because the village is located on a major road. The village has a gas station, tire repair shop, cafe and a grocery. Many of the residents are supported by remittances from relatives in cities. In Ar Ruwaydah (Suhul) and Ar Ruwaydah (Itban), however, agriculture is important and many are engaged in such activity. The reasons for the importance of agriculture here are the favorable water and soil condition.

Agriculture is important in two Bedouin villages. This proves that Bedouin settlers like to farm their land if the circumstances are right. Even some residents of Bedouin villages lacking agriculture expressed interest in farming. Agriculture is perceived by many former nomads as an attractive and viable alternative to nomadism.

Semi-nomadism is important for the settlers. About one third of the population take their animals to the desert during the grazing season. This is limited to a radius of about twenty kilometers from the settlement.

3. *Ibid.*, p. 138..

The duration of this outing is also limited to about two months in the cool season.

All the hijar have electricity and schools. Al Hisi has a police station because it is located on a highway. Ar Ruwaydah is the largest Bedouin hijrah in the area and is composed of two parts. The southern part is larger and older than the northern part and is occupied by the Suhul tribe. The northern part is settled by the Utayba tribe. A small wadi separates the two sections of the community. The village has electricity, schools for boys and girls, post office and clinic. Three of the Early Hijar in the Mihmal are located on a paved road, and the other two are only about eight kilometers away from a paved road.

Bedouin settlements are similar to traditional villages in structure and house types. The typical house type is the mud brick (abode), and the villages are generally compact. Bedouin villages, however, are more dispersed and the houses are simpler. This reflects the former nomads' desire for open space and also the more recent origin of their settlement.

In recent years, modern houses made of concrete and cement blocks have spread in rural areas. A major factor in this growth has been the government massive financing of private housing projects. The state owned Real Estate Development Bank grants interest-free loans of up to 300,000 Saudi Riyals for construction of a new house. This resulted in a spectacular housing boom that is literally changing the landscape of the country.

Recent Hajar

The Recent Hajar are Bedouin settlements which were established after 1930 and are "spontaneous Bedouin settlements in rural areas."⁽⁴⁾ Bedouins created these villages primarily for economic factors and their desire for re-dentarization. There are hundreds of such settlements throughout Saudi Arabia.

There are two Recent Hajar in the Mihmal area. Ruwaygheb was established about 1958 and Al Khatilah was settled in 1973. Settlers in both places came directly from nomadism. Ruwaygheb is located in a narrow gap in the Urma Escarpment (Figure 2). The settlement site was chosen for the presence of a fresh water well, otherwise the site is small and not conducive to growth. Expansion of the village is proceeding rapidly in an adjoining site about 500 meters to the west. The population of both villages is from the Suhul tribe. In addition, Al LKhatilah has some residents from YUtayba and Rashayda tribes.

It appears that most settlers engage in semi-nomadism in both villages. Agriculture is limited to two tiny palm gardens in each village because water is scarce. A large part of the population is supported by remittances from relatives working outside the settlements.

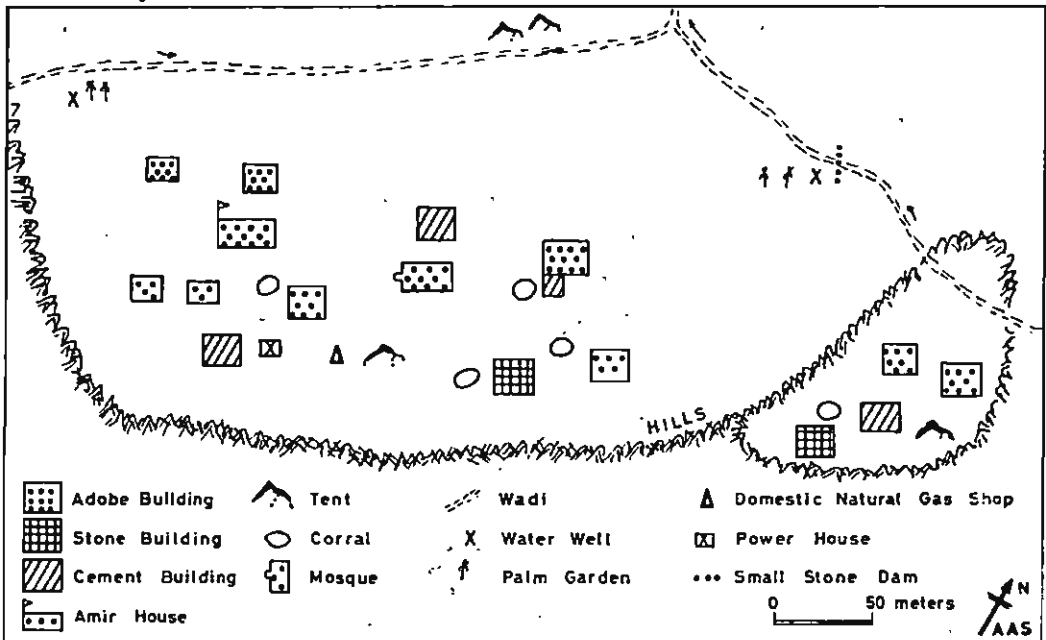
Although the hijrah of Ruwaygheb is of little economic significance, a paved road connects it to the main highway, thirtysix kilometers to the west. This road serves not only the village but also many nomadic Bedouins

4. *Ibid.*, p. 169.

in the area. Ruwaygheb also boasts a school and a clinic, while Al Khatilah lacks such facilities. Both villages are deficient in trade and service functions.

The Recent Hijar usually exhibit a more nomadic character compared to the Early Hijar. This is manifested by the presence of some tents within these communities, for example. Some settlers either did not have enough time or adequate funds to build houses. The Recent Hijar are also more dispersed in structure because they are younger in age and smaller in population than the Early Hijar. The typical house type is still the abode house. Numerous houses however, are built of concrete, cement bricks and stone (Figure 3).

Fig.3 AL KHATILAH - MORPHOLOGY OF A RECENT HIJRAH



Conclusion

Bedouin settlement in the Mihmal increased the number of settlements and population of the area by almost one-fourth. Nomadism in Saudi Arabia, as elsewhere, is on the decline and most likely will continue to do so in the future. There is immigration from the hijar and other rural regions to urban centres. It is observed, however, that the population of the hijar is stable or increasing because nomadic Bedouins constantly settle in these villages.

Many of the hijar face some problems as settlements. Some settlements' sites are not suitable for agriculture and growth. These marginal sites were chosen for settlement because they were tribal wells or had grazing resources. Little thought was given to farming at the initial stage of settlement.

The most serious problem, however, is the shortage of water for domestic use and agriculture. Most of the hijar in the district do not have adequate potable water. The settlers are obliged to transport water from other places. In larger villages, the government makes such arrangement at its own expense.

Bedouin settlement in the Mihmal generally fits the model of Bedouin settlement in other parts of the country. The Early Hajar and the Recent Hajar were established at the same periods as in other regions. The processes of nomadic sedentarization, site selection and acquisition are similar. The hijar's structure and functions in the

Mihmal do not depart significantly from the pattern observed in other districts

On the other hand, there are some differences between Bedouin settlement in the Mihmal and other areas. Some of these differences are due to the innate characteristics of Bedouin settlements, while other differences are caused by the Mihmal's resources and location.

In many parts of Saudi Arabia, Bedouins settle near urban centres in their own neighborhoods or camps. The author termed these as Hilal (singular hillah).⁵ No hilal were observed in the Mihmal simply because there are no large towns in the area. It was also noted that members of five tribes have settled in the area in the twentieth century. This is a large number of tribes for such a small area. This might be attributed to the fact that the Mihmal lies on the boundaries of two of the tribes : Utayba and Qahtan.

Agriculture in the hijar of the area is not important compared to other regions like the Qasim. The primary factor for the limitation of agriculture in the Mihmal is its modest water resources. The study area is dominated by the city of Riyadh and this explains the meager functions and services of its settlements. Riyadh provides the district with most of its needs including employment.

5. *Ibid.*, p. 219.

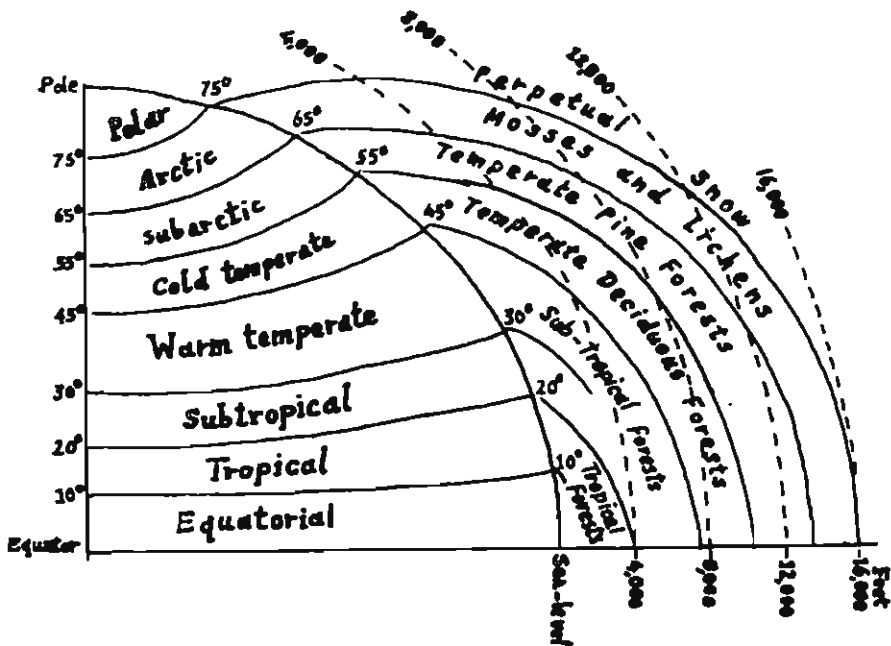
THE PLANT GEOGRAPHY OF SAUDI ARABIA

By Dr. SAYED FARAG KHALIFA

Introduction:

Plant geography is the branch of botany dealing with spatial relationships of plants in present and past. This leads to study and explain the plant distribution in the world. Plant geography is not only related to botanists but is also related to zoologists and geologists.

The natural vegetation of any part of the world can generally be described as belonging to one or other of three main types : forests, grasslands, and deserts. There are, of course many sorts of each division and considerable areas where intermediate condition prevail. In the forests the plants are mainly trees, in the grasslands, they are mainly grasses ; while deserts may be considered as areas where the total plant life and cover are scanty and limited. Forests in total contain large potential supplies but they are mostly removed and destroyed in modern societies. Their removal provides with space for expansion and the opportunity for an economic form of agriculture which supplies man every year with growing needs. Grasslands, on the other hand, meet the primary requirements of man since they provide space and areas of cultivation. Deserts are of less value for agriculture or supplementation with space, but in many cases they are rich with natural oil and/or minerals.



Diagrammatic representation of the vegetation of latitude and altitude of the world (Adopted from *Herbertson's Physiography*, Edward Arnold & Co.).

The climatic conditions are the main factors controlling the distribution of the previously mentioned types of plant vegetation. Briefly, deserts are found where the prevalent conditions are excessive heat or cold, usually accompanied by lack of moisture, at least at some seasons. Forests are, on the other hand, found where precipitation is high. Grasslands reflects medium climate values where there is sufficient but not excess rain and mild temperature. This climate is considered to be also the best for mankind.

The Significance of Plant Geography :

The geographical distribution of plants is economically of important kind to man. An example can be presented by cereals which consist the main human food. The grains having an importance greater than that of others are wheat, barley, rye, oats, rice and maize. Broadly speaking, the first four are crops of temperate regions but the last two are of tropical countries. Thus, these are their present cultivation zones but in general, wheat probably had its original home somewhere in western or central Asia, barley and oats in rather more northerly parts of the same region, and rye somewhere more to the north. Rice comes from the tropic regions of eastern Asia and maize probably from somewhere in central America though there is more than one opinion about this.

Studies on the distribution of earlier human civilisations indicated that they have much the same natural distribution as the chief grain crops. This indicates that plant geography is a subject which is so intimately connected with human affairs. It can throw light not only on many present-day questions but also on many relating to the past.

Plant geography is most connected with plant ecology concerned with the way in which plants are mutually related to one another and to the conditions of their habitat. Plant geography, on the other hand, is concerned primarily with the correlation between plants and the distribution of external conditions. The former is physio-

logical; whereas the latter is geographical. Expressed in another way, the difference is that between vegetation and flora.

The Division of the Earth into Major Zonations :

The major zonation of the plant life of the world in present is into 3-latitudinal zones : polar, temperate and tropical. Hansen (1920) gave a more scientific classification which is :

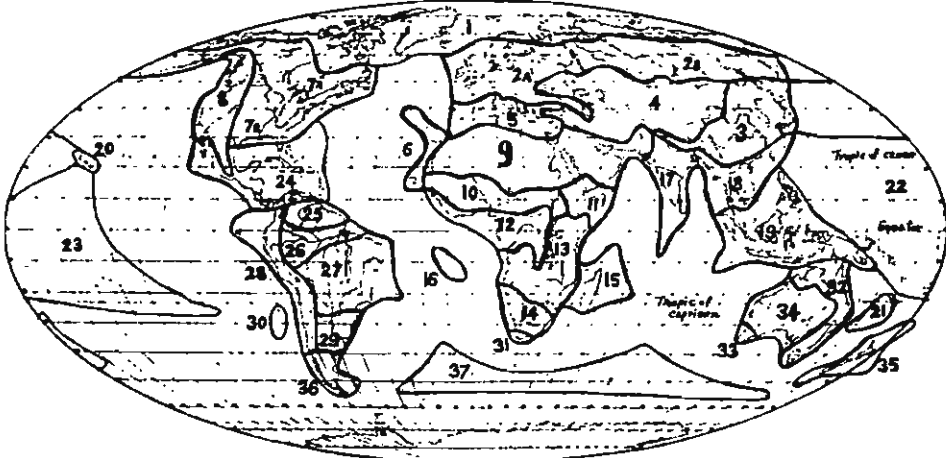
1. Equatorial zone — 0.0 — 15.0 degrees on either side of the equator.
2. Tropical zone — 15.0 — 23.5 degrees on either side of the equator.
3. Subtropical zone — 23.5 — 34.0 degrees on either side of the equator.
4. Warm temperate zone — 34.0 — 45.0 degrees on either side of the equator.
5. Cold temperate zone — 45.0 — 58.0 degrees on either side of the equator.
6. Subarctic zone — 58.0 — 66.6 degrees on either side of the equator.
7. Arctic zone — 66.6 — 72.0 degrees on either side of the equator.
8. Polar zone — 72.0 — 90.0 degrees on either side of the equator.

However, this classification was found to be not in agreement with the distribution of plants in the world because it did not consider the elevation of the land from sea level. Vertical rise has its effects on changes of botanical vegetation. As one ascends a mountain, the plant life changes due to differences in climatic conditions and if rise is sufficient, a condition characteristic of polar latitudes is reached, even if on the equator. A clear example is shown by tropical mountains where at the lowest levels between sea and 600 metres, truly equatorial vegetation characterised by palms and bananas is found, above this is a zone of subtropical types; above them another warm temperate zone of evergreen trees; next a zone of deciduous trees such as are familiar in temperate regions; then a zone of coniferous trees; a zone of alpine shrubs, and finally a zone of alpine herbs. Above this there is no appreciable vegetation. Another contradiction concerning the zonation of phytogeographical regions of the world according to latitude is that it did not also take into consideration the warm currents of Gulfs. Such currents made the flora of British Islands similar, to wide extent, to the flora of Southern warm countries.

Floristic Classification of Ronald Good :

The classification of Ronald Good (1947) is generally looked-for as the most common classification which counteracted the different contradictions that have faced the old classifications.

Map of the World Showing Florestic Regions



After Ronald Good (1947)

Approximate scale 1:100,000,000 (1600 miles - inch) along Equator

- | | | | | |
|--|----------------------------|------------------------------|-----------------------------|-------------------------------------|
| 1. Arctic and sub-arctic | 8. Pacific North American | 16. Ascension and St. Helena | 24. Caribbean | 32. N. and E. Australian |
| 2. Euro-Siberian
A. Europe
B. Asia | 9. African Indian Desert | 17. Indian | 25. Venezuela and
Guiana | 33. S.W. Australian |
| 3. Sino-Japanese | 10. Suddanese Park Steppe | 18. Continental S.E. Asiatic | 26. Amazon | 34. C. Australian |
| 4. W. and C. Asiatic | 11. N.E. African Highland | 19. Malaysian | 27. S. Brazilian | 35. New Zealand |
| 5. Mediterranean | 12. W. African Rain Forest | 20. Hawaiian | 28. Andean | 36. Patagonian |
| 6. Macaronesian | 13. E. African Steppe | 21. New Caledonia | 29. Pampas | 37. S. temperate
Oceanic Islands |
| 7. Atlantic - North American
A. Northern, B. Southern | 14. South African | 22. Melanesia and Micronesia | 30. Juan Fernandez | |
| | 15. Madagascar | 23. Polynesia | 31. Cape | |

According to Good's classification the world is divided into 6 phytogeographical kingdoms which are further subdivided into 37 provinces. These provinces can be demonstrated on the map of the world presented herein.

The Vegetation of Saudi Arabia as a Part of the Vegetation of the World :

A glimpse at the map of florestic regions of the world shows that the Arabian Peninsula including Saudi Arabia is located within the region number 9 of Good's classification with the exception of Yemen and South Arabia. Good referred to this region as the : North African — Indian Desert Region and divided it into two subregions as follows :

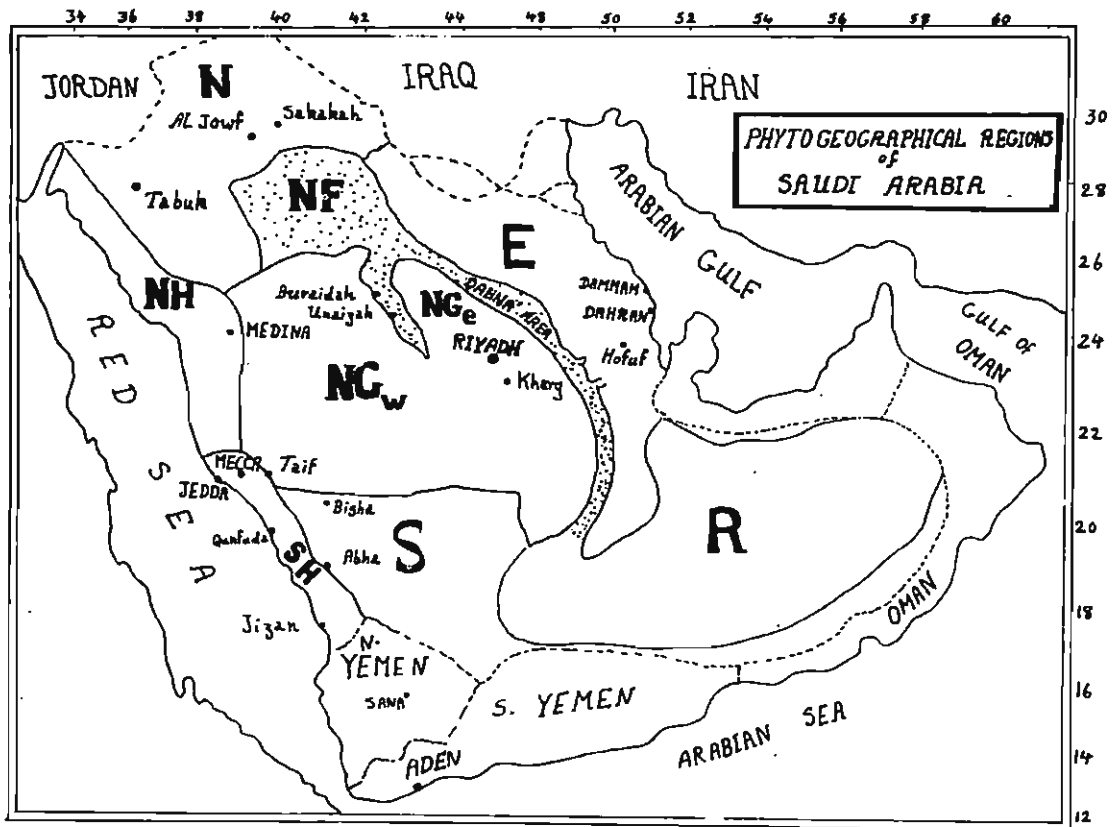
9-a — Sahara — Arabia (Except South).

9-b — Mesopotamia — South Persia — West Pakistan. It is of certain interest that Yemen and South Arabia were included in the phytogeographical province number 11 in Good's classification which is called the : North-east African Highland and Steppe Region.

The North African — Indian Desert Region, within which the majority of Saudi Arabia is located, is characterized by limited amount of Rains usually less than 20 inches per year. The Region number 11 to which Yemen and South Arabia are related has a higher annual rainfall ranging from 20 to 60 inches.

The Phytogeographical Regions of Saudi Arabia :

Saudi Arabia by its turn is subdivided into the following phytogeographical regions :



1. Hijas region :

- a. **North Hijas (NH)**, representing the western part of Saudi Arabia that extends alongside the Red Sea Coast north of Jeddah.
- b. **South Hijas (SH)**, representing the southern part of the western region extending south of Jeddah till Yemen boundaries.

2. **Northern region (N)**, including Tabuk, Al Jawf and Sakakah areas.
3. **Nefud region (NF)**, including the great northern Nefud area, Dahna area and Al-Qasim area .
4. **Najd region :**
 - a. **Western Najd (NGw).**
 - b. **Eastern Najd (NGe).**
5. **Eastern region (E)**, between Dahna and the Arabian Gulf.
6. **Al Rub' Al Khali region (R)**, representing most of the southern and eastern parts of Saudi Arabia.
7. **Southern region (S)**, lying to the east of south Hijaz, to the south of Najd and to the north of Yemen. It includes Abha, Bisha and Nagran areas.

Each of the previously mentioned regions is characterized by certain climatic and edaphic conditions. Consequently, the flora of each region may vary either slightly or distinctly from the flora of the other regions.

However, the ecological conditions and the floras of each region to be discussed in details need many other pages.

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