INTRODUCTION

It is a well known fact that Gujarat has a rich heritage of archaeological remains beginning from the stone age up to medieval period. Hence Archaeologists like Bruce Foote, Zeuner, Sankatia and Prof. R N Mehta have been doing useful work. Their work and works of many other scholars have brought to light hundreds of sites of various periods. In addition to this, archaeological excavations of sites like Lothal, Rangpur, Somnath, Rojdi, Surkotda, Jokha, Kanewal, etc. have revealed interesting results. Hence when it was suggested by Prof. R N Mehta to take up Ahmedabad district for archaeological survey it was decided to take up this subject for a Ph.D. thesis.

Aims and objectives:

This was decided because of the important position of Ahmedabad district on the central plain of Gujarat. Actually, Ahmedabad district is covering the lower reaches of river Sabarmati and its tributaries coming from North, i.e. Mehsana and Sabarkantha districts with dry sand plain in its northern part, while black soil region and part of Bhal region around the northern part of the Gulf of Cambay. In fact, the Harappan sites of
Lothal and Rangpur are situated in that region. Moreover, Mehsana district which is to the north of Ahmedabad district, is rich in microlithic sites like Langhnaj etc. and temples of Chañlukyan period. Thus it was thought that Ahmedabad district must be quite rich in archaeological antiquities. Particularly the regions around Lothal and around the lower reaches of Sabarmati could reveal Harappan sites which could open new chapter in the archaeology of Gujarat. This was most probable because of recent discoveries of late Harappan sites in the south of Ahmedabad district. However, very few early historic inscriptions or other epigraphic records are discovered from this region. Only one copper plate, the grant of Dhruvasen II, refers to a village - Kasindra of Daskroi Taluka. In fact, no direct inscriptive record of early historic period is discovered from Ahmedabad district proper. Hence this period was also to be checked in this district. Moreover, it must be considered that there is much scope for medieval archaeology in this district after the work of Dr. K.N. Mehta in this medieval archaeology.

SCOPE AND LIMITATIONS:

The basic scope of this thesis is archaeological survey of Ahmedabad district i.e. the political area
of this district. For this most of the 597 villages were explored along with other sites of archaeological potentialities. Thus, it is a political area as a unit and not a geographical unit with a uniform geographical background. For example, the northern part of the district up to Viramgam is a sandy plain of yellow silt which is a part of the plain of the whole of the northern Gujarat, excluding hilly regions of Sabarkantha and Banaskantha districts and the coastal black soil region known as Bhal which is extended in the Kheda district also. Due to this the cultural or geographical regions of this district are extended beyond its political boundaries, hence on the whole the ultimate archaeological regions conclusions put under a political unit and not a cultural or geographical unit. This is a major limitation of this survey as well as its interpretations.

In time this thesis is spread from the stone age up to 1300 A.D. i.e. about the end of the rule of Gujarat.

The chronological cultural sequence of this district (Fig. 1) will be as under:-

**Pre-historic period:**

a) Stone Age - Microlithic period.

**Protohistoric period:**

Chalcolithic period.
Historic period:

Early Historic I & II
Early Historic III & IV

METHOD OF RESEARCH:

As the thesis is based on archaeological material all these periods are studied in the light of material relics collected from this district. These relics in the form of antiquities are noted and recovered on the spot during explorations and later on these were studied in details.

To do this naturally, archaeological field work was undertaken during dry months of every year. But before doing the Census reports, Archaeological Survey Reports of Archaeological Survey of India, district gazeters, articles and papers published on the archaeological subjects and other related subjects were studied and notes were prepared. Publications like "Nakashaman Gujarat" and District Information Office publications related to the present work were also consulted for location of probable archaeological sites and antiquities, like ancient structures, sculptures, coins, pottery etc. In addition to this, Revenue Officers, teachers and Sarpanchas of villages were also interviewed for collecting any information which can lead to archaeological antiquities or sites. Moreover,
the survey of India maps were also consulted for sites and habitations with typical geographical background or location of strategic importance.

After all these preparations, village to village survey of the district was undertaken. Almost all the hintered villages were covered generally on foot or bicycles. These villages and their surrounding areas were explored after information from village people or teachers or Sarpanchas. When an archaeological mound-monument or sculpture was found it was photographed, measurements were taken and other information was recorded in the logbook on the spot. Antiquities like stone tools, pottery, beads etc. were collected from the site and packed and labelled for further studies at the department.

These antiquities are washed, classified and preserved. They were studied at the department.

To make a detailed study of all these antiquities monuments etc. the thesis is divided into seven chapters arranged in the following order:

Introduction:-

1) General & geography 
2) Political history 
3) Exploration 
4) Architecture, sculpture & Iconography 
5) Antiquities 
6) Conclusion
From the above list it will be clear that arrangement of chapter is planned with a purpose. Introduction gives the explanation, justification of the thesis, its scope and limitations, methods of research and general idea of the whole thesis.

After this the first chapter regarding general information and geography is kept. This chapter gives general information about the district. Following this, the geography of the district is described as a background for the human activities in this district. Thus, it describes geology, rivers, soils, vegetation etc. of this district.

Political history of this region is described in Chapter II. Some details start from the Mauryan period (320 B.C. to 185 B.C.) and ends by 1300 A.D. i.e. after about the end of Karna Vaghela. Here all information regarding political history is presented after referring original sources like inscriptions, coins, etc. Thus, it provides the political background for the historical period of this region.

The third chapter deals with the explorations of this district because it is the base of all the
the archaeological studies of this district. Here, important explored sites are described in chronological order. Details of geographic background of the sites, topography and measurements are given here.

The fourth chapter describes the architecture, sculptures and iconography. For this purpose, the sculptures are described and studied in view point of art as well as iconography. All these are recorded in photography and measurements.

Unfortunately, very few architectural remains were discovered from this district. These were Chalukyan structures, live tanks and temples. These are studied in details for their architectural features and sculptures. For better understanding, detail photography and drawings like pottery, etc. are described in this chapter. These antiquities are arranged in chronological order. They are demonstrated in drawings and photography.

Chapter V deals with minor antiquities such as microliths, pottery, terracotta objects, coins, beads and ivory as well as bone objects. These objects are classified according to their chronological order and studied in respect of their form, technique and artistic style. Particularly microliths and pottery are studied in their minute details. Pottery covers almost the whole period
of the thesis from protohistoric to early medieval period.

In the final chapter of conclusions archaeological data of Ahmedabad district collected so far is studied in its total perspective with inter-relation of various data and then interpretations are made. On the basis of these interpretations the conclusions regarding life of man beginning from microlithic period and ending about 1300 A.D. are drawn. This gives almost a continuous story of human activities in this district.
CHAPTER I

GEOGRAPHICAL BACKGROUND
ORIGIN OF THE NAME:

The name of this district, i.e. Ahmedabad is derived from its district headquarters, Ahmedabad. This name was given to this city by its founder, Ahmedshah, when it was founded in 1411. Before the foundation of Ahmedabad, there existed at this site a town called Karnavati. The name, Karnavati, is derived from the name of Karnadev (1066 to 1094 A.D.), Chalukyan ruler of Anihala-pataka. According to Dr. A.B.Dhruva, Karnavati (modern Ahmedabad) was in a region called Anarta i.e. North Gujarat. Earlier to this, the site was occupied by a small place called Ashavai, from the name of a Bhil King called, Asha.

SITUATION:

The district of Ahmedabad is situated between 21°-56' and 23°-33' north latitude and 71°-39' and 73°-02' east longitude. It measures 8707 square kilometers and forms 4.44% of the total area of the State (Fig. 2). The Mehsana and Gandhinagar districts form its north boundary while to its south lie the Kheda district and the Gulf of Cambay. Sabarkantha forms its north-east boundary and Surendranagar forms its western boundary, while Bhavnagar district is to its west. This district consists of six Talukas as under:-
Ahmedabad district as a whole forms a level plain with a north-east-south-west slope. According to the geological point of view, some of its part was under the sea. Even today a part of it, around the Gulf of Cambay is subject to water logging. It is possible that in the remote past a part of Bhal region may have been under water.

HILLS:

The district has no hilly features of any importance. However, some hilly features are seen at Vasai and Mirol in Daskroi Taluka in the southern section of the district. Only in the extreme north-east and south-west does the plain surface of the district rise in low hilly region. In the west, a few miles from the town of Rampur in Dhandhuka, a series of low hills gradually rise towards
the parent range of Chotila, where a conical peak, 600 feet above sea level, is the most remarkable feature of the country. Some of the hills about Ninama, the most western part of Dhandhuka, are covered with quartz and limestone. The sandy plain of the district has sand dunes formed due to wind activities. Between such dunes there are ponds at many places. Such sites often show habitations of Microlithic man.

RIVERS:

In the district, there are two distinct river systems, one flowing south-west from the high lands of Eastern Gujarat, the other flowing east from the Saurashtra area. These rivers are not navigable and are of only local importance. The Sabarmati, with its tributaries like Khari, Meshvo and Majham, the Shelva and the Andhari, rises from the northern hills and flows to the Gulf of Cambay. Rivers like Bhogavo, Bhadar, Utavli, Nilki, Pinijaria and Adhia flowing from the Saurashtra area struggle with a more or less success through the shifting alluvial tract of black soil eastwards and emptying into the Gulf of Cambay.

THE SABARMATI:

This river is referred to in Puranas like Padmapuran, Skandapuran, etc. as Svabhramati. This river rises under
the name of Sabar from the south-west of Ambaji. Then it takes a southerly course and enters this district from north-west corner. It is then joined by the Hathmati and now goes under the name of Sabarmati. In its further course, the river passes near Prajti, Bijapur and Daskroi. It separates Dholka Taluka of Ahmedabad from Kaira district and finally after 200 miles discharges its water into the Gulf of Cambay. In the upper parts of its course, the river cliffs are very high, in some places rising to sheer heights of nearly 30 to 40 meters, but gradually these heights come down to 10 to 12 meters near the city of Ahmedabad. The Sabarmati group of rivers pass through alluvial plain with high cliffs, while the group of rivers of the south-western part cut their course in blackish soil. This blackish soil forms what is known as Bhal region, a region famous for its wheat. The stream of the river is for the most part shallow and sluggish. The old Ahmedabad city is situated on the bank of the river. The river channel is quite wide but the depth of the channel measures roughly less than 8 meters.

THE KHARI:

The Khari rises three kilometers north of Prantij. It flows over a winding and shallow bed in a south-west direction. It flows through Dehgam Taluka, Daskroi Taluka and then enters Kaira district.
MESHVO:
Rises from south of Dungarpur in Rajasthan and after flowing through Sabarkantha and Mehsana flows through Ahmedabad and meets the Sabarmati.

MAJHAM:
Rises from the area near Dungarpur in Rajasthan and after a course of nearly 160 kilometers meets the Vatrak river.

VATRAK:
Rises from south-west Rajasthan near Dungarpur and flowing through Ahmedabad district, meets Sabarmati.

SHELVA & ANDHARI:
These two rivers are short and unimportant streams running through the southern half of Dholka. They are tributaries of the Sabarmati and run through the black soil of Bhal area.

THE BHOGAVO:
The river Bhogavo, or rather, that broken portion of it which flows through the Ahmedabad district, takes its origin near the Dholka village of Dhingra and runs southward for about 15 kilometers, where it is joined by
the Omkar from the Limbdi territory. Then it runs eastward and after forming the boundary between Dholka and Dhandhuka for about 17 kilometers empties itself into the sea near the mouth of Sabarmati. During the rainy season the flood water of the Nal also passes into this river.

**THE BHADAR:**

The river Bhadar rises in the hills to the south of Chotila and enters the district of Ahmedabad at the village of Sheklidol. It is a shallow stream. The river flows via Dhandhuka and then turning southward, a short distance to the east of Dholera, empties itself into the Gulf of Cambay. This river has changed its course in 1844-45 from south to east.

**SOILS**

The soils of the district can be broadly classified as black and medium black, goradu, kyari and rocky.

(1) **BLACK AND MEDIUM BLACK SOIL:**

Black and medium black soils are noticed in the Bhal area (low lying flat land) comprising the southern half of Dholka Taluka and eastern half of Dhandhuka Taluka. The depth of the black and medium black soil varies from 60 cms. to 150 cms. Below this, the soil is yellowish kankar. The underground water is brackish.
(2) **GORADU SOIL** (Gormati)

Goradu soil varies from fertile brown to sandy loam and is found in Dehgam Taluka to the north of the city of Ahmedabad, Daskroi Taluka, the eastern parts of Sanand and Dholka Talukas, and the north-east portions of Viramgam Taluka. The two variations are locally known as Goradu and Sandy (Sandy-vakaru), respectively. The soils are fertile and have a depth of about 3 to 5 meters.

(3) **KYARI SOIL**:

It is found in the southern half of the city and Daskroi Taluka. The south-east portion of Sanand Taluka and Nalkantha tract of Dholka and Viramgam Talukas are formed by alluvial deposits. This is the most fertile soil. It has good capacity to retain moisture for paddy cultivation. Locally, this soil is known as Bhal soil of Daskroi Taluka and Nalkantha. The well known varieties of paddy such as pankhali, kamod, jirasal, sukhavel, sutarsal and the coarse variety of Basmati are grown in this soil.

(4) **ROCKY SOIL**:

It is found in the western part of Dhândhuka Taluka which is known as kaner tract. It is shallow, light in texture, and fit for early maturing varieties crops.
MINERALS

Main minerals now are natural gas and oil which are found around Kalol. In addition to this, agate, limestone, kankar and clay are commercially exploited.

AGATE:

The veined agate, doradar, one of the most valued of Cambay stones is found near Rampur in Dhandhuka, under the surface soil in pebbles of various shapes but not more than 250 grams. When worked upon, it takes a high polish and is of two kinds, showing either a dark ground with white streaks, or dark veins on a light background. A chocolate stone, nalia, of brownish earthy base is found near Rampur imbedded a few meters deep in the soil in masses from one to eight pounds in weight.

LIME STONES:

Nodular lime stone/kankar is found in rivers and water courses, and in extensive beds 12 kilometers southwest of Viramgam at the village of Kankravadi and at Barvala in Dhandhuka. It is used for manufacturing mortar and in road making. At Shior a variety of gneiss make smooth flakes from 3 to 15 cms. thick, but it splits on exposure to the air and it is so hard and brittle that it cannot be dressed easily.
CLIMATE & TEMPERATURE

The climate of the district, except in the southern tract near the sea coast, ranges from severe winters to hot summers. The cycle of seasons consists of the winter season from November to February followed by summer from March to June and monsoon from the last week of June to the second week of September. The winter season is preceded by a short autumn which lasts from September to about early November.

April and May are the hottest months of the year. The temperature reaches up to 45°C in these months. The maximum temperature crossed this level twice during the last decade - once in May in 1962, when the temperature reached 64.4°C and again in the same month in 1970 when the temperature rose up to 47.5°C. The lowest minimum temperature of 4.4°C was recorded in February 1961 and in January 1964. The temperature recorded in December, which was the coldest month of the season in the year 1970, was 10.9°C. The average annual rainfall of the district (based on 65 + 070) is 732 mm and on an average there are 33 rainy days in the year. The monsoon in this district is generally accompanied by gusty winds.

FLORA AND FAUNA

FLORA: Ahmedabad, with no forest or large groves,
is on the whole rather bereft of timber (Tectona grandis) except Sanand, Daskroi and Dholka where Mango, Rayana (Mimusops hexandra), Mahuda (Madhuca latifolia), Limdo (Azadicta indica) and other shady trees are found either singly or in a small groves. Most of the district is poorly wooded. Some parts are well stocked with Mango (Mangifera indica) and Rayana trees; others are covered with brush wood. One kind of gum used by goldsmiths and dyers is exported. The Piplo (Ficus religosa) and bordi (Zizyphus mauritiana) yield a wax much used by goldsmiths for staining ivory red. Pipal, bordi and Kakhra (Butea monosperma) leaves are eaten by buffaloes. The mahuda is very common in the north-east. It is easily boiled with grain and the leaves of a creeper called, dodi (Leptadenia reticulata) which is a very favourite article of food with the Bhils.

FAUNA:

Animals (Domestic):-

The chief domestic animals of the district are oxen, cows, buffaloes, sheep, goats, horses, camels and asses.

Some years ago, horses were very common in the district and were owned by large landholders, well-to-do cultivators and town people. Considerable numbers of horses
of Kathi, Kabuli, Sindhi, Kachhi and Arab breeds were brought by Kabuli merchants in Ahmedabad. They found a ready sale in the city of Ahmedabad among well-to-do Hindu and Muslim classes and among large landholders in Dholka, Dhandhuka and Viramgam. But now cars, scooters and trucks have diminished their demand. Camels are bred by Rabaris, Rajputs and Sindhis in Daskroi, Viramgam and Dhandhuka. The male only is used for carrying burdens and the female for milk which is the staple food of the Rabaris. The Ahmedabad camels are less priced than those brought from Marwar. These, especially the very swift Thal camel, which can easily travel fortyfive miles a day, are used for riding by Sindhis. The largest number of Marwar camels is found in Dhandhuka and Viramgam. Every large landlord or Talukdar owns atleast two or three.

Asses of two kinds are found in the district; the common and the big white ass from Halar in Kathiawar. They are owned by potters, rice huskers, earth diggers orods and Ravals. The largest owners in the frontier villages of Dholka and Viramgam, sometimes have as many as 300. They are used in carrying grain, vegetables and salt.
Wild animals:

About a hundred years ago Tigers, Lions and other large animals were common in Ahmedabad district. Tigers were found (in 1783)\textsuperscript{7} in the desolate ground outside of the city walls. The Dholka sub-division forest near the Sabarmati was the resort of lions and tigers.

The Wolf (Canis pollipes) is common in the west of the district on the low lying salt lands near the mal. The Hyaena, Taras or Tarak, Ayoenastriate found wherever there are hills.

The Deer tribe, the Sambar, is occasionally found. The Blue Bull, Nilgai (Portax pictus) formerly was very common. Though much reduced in numbers, it is still found in the plains.

Small animals:

Of smaller animals the Hare is found everywhere.

Game Birds:

Of game birds, the large sand grouse (petrocles arenarices) is found during the cold season, November to March, in the extreme west of the district. This is a noble bird measuring from 15 to 20 cms. across the wings. It is very shy and hard to get near. The common sand grouse (Petrocles exustus) is plentiful throughout the
district, especially in the west. In Dhandhuka, these birds may be seen in large number in the morning near water. They breed between December and April.

The common peacock (Parocristatus) is found in wild eastwards in the untilled tracts near Modasa and to the south in the small island of Piram of Gogha. They are wild and shy. Tame peafowl abound in some villages. The partridge (Francolines pictus) and the common grey partridge or (Tyaronis pondicerianer) are common everywhere.

Quail, the Jungle Bush Quail (Perdicula cambagensis) is common in bushy, untilled lands. The Rock Bush Quail is found only in Prantij. The grey Quail (Conturnix communis) is common all over the district except in black soil bearing areas. In some places, except during June, July and August, these birds are to be found all the year round. The Black-Breasted or Rain Quail (Coturnix coromandelica) remains in the district all the year round, but between May and September it becomes rare. In October, when the grain is ripening, they move into the millet and pulse fields, later on they are in rice, wheat and grain fields and when the crops are cut, they go back to the grasslands. They breed in considerable numbers in July, August and September.
According to the 1971 census, there were 95 languages given as mother-tongue. About 80% of the district population has Gujarati as their mother-tongue. About 7.21% of the population has Urdu and 5.48% has Hindi as their mother-tongue. Those having Sindhi as their mother-tongue form 2.38% of the total population. While those having Marathi as their mother-tongue account for 1.90%. The mother-tongue of 97.76% of the rural population is Gujarati as against the comparable proportion of 71.20% of the urban population. The proportion of urban population having Urdu and Hindi as their mother-tongues are 10.57% and 7.91% respectively. The proportions of those having Marathi and Sindhi as their mother-tongues are also higher for urban areas in comparison with the rural areas.

**Percentage Distribution of Persons According to Mother-Tongue (Major Languages 1971).**

<table>
<thead>
<tr>
<th>Language</th>
<th>Total Percentage of total population (1971)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Gujarati</td>
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<td>Kachchhi</td>
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<tr>
<td>Marathi</td>
<td>2.38</td>
</tr>
<tr>
<td>Sindhi</td>
<td>2.99</td>
</tr>
</tbody>
</table>
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