

Thus, the physiographic setting of the Ambala district is characterised by diverse types of landform zones; hilly tracts with a structural valley sandwiched in between, along the northern margins; a dissected foothill plain adjoining the hills; flood plains along the Yamuna, Ghagghar, Markanda and the Somb and an upland plain lying immediately to the south of the foothill plains.

RIVER SYSTEM AND WATER RESOURCES

The district is mainly drained by non-perennial streams. The Yamuna is the only perennial river which borders the district on its south-east. From east to west, the drainage system of the district comprises the following:—

1. The Yamuna and its tributaries
2. The Chautang, the Rakshi and the Saraswati
3. The Markanda and its tributaries
4. The Dangri (Tangri) and its tributaries
5. The Ghagghar and its tributaries

The Saraswati, Markanda and Dangri (Tangri) streams ultimately drain into the Ghagghar river beyond the territory of the district. The Ghagghar along with its tributaries, however, constitutes an inland drainage system.

The Yamuna.—Rising from the snow-clad peaks of the middle Himalayas at Yamnatri, the Yamuna enters the district from its north-eastern corner through a narrow corridor in the Shiwalik hill range. After flowing due south for about 7 kilometres, the river takes a little turn towards south-east near village Faizabad (Saharanpur district-UP) and thenceforth it maintains a south-westerly direction. From this point onward the river channel becomes braided and starts widening. The main stream of the river then runs along the border of the Ambala and Saharanpur districts as far as village Nawazpur below which there are a few villages of the Saharanpur district on the Western side of the river. The combined Somb and Pathrala streams join the Yamuna at Mehar Majra. From the eastern side, the river is joined by the Budhi Yamuna near village Daryapur and a few kilometres lower down, it leaves the district near village Naharpur.

The Yamuna has a great history, mostly shrouded in mystery. It is mentioned in connection with Dasarjana, the battle of the ten kings mentioned in the *Rigveda*. There are both physical and historical grounds for the belief that the Yamuna during early times discharged into the Indus system through the now neglected bed of the Saraswati.¹ For reason yet to be fully investigated, the Yamuna-Satluj plain is said to have experienced an uplift which

1. R. C. Majumdar, *The History and Culture of the Indian People*, Vol. I, *The Vedic Age*, 1965, p. 87.

dismembered the then river system, the Satluj shifting to the west and the Yamuna to the east, leaving the Ghagghar a truncated independent stream with utterly inadequate water supply for maintaining its flow up to the Rann of Kutch. The presence of the vast flood plains and abandoned river channels on either side of the river suggests that the river has been changing its course in the past.

The Pathrala *nadi* and Somb *nadi* are tributaries of the Yamuna. The Pathrala also known as Palasi *Uhad* or Boli *nadi* rises on the border of the Sirmaur district (Himachal Pradesh) and after about a course of 32 kilometres due south discharges its water into the Western Yamuna (Jumna) Canal near Dadupur. The Somb *nadi* rises in the Sirmaur district and takes a southerly course. After about 40 kilometres, it discharges its water into the Western Yamuna (Jumna) Canal at Dadupur. At Dadupur there is a level crossing over the combined Pathrala and Somb torrents. During rains, the surplus water of these streams is diverted from the Western Yamuna (Jumna) Canal through a regulator at Dadupur and the combined streams joins the Yamuna at a village Mehar Majra.

The Chautang, Rakshi and Saraswati.—The Rakshi takes its birth in the plains while the Chautang and the Saraswati originate in the lower hills. The Chautang and the Saraswati run parallel to each other until the point of their secret junction. From this point, the bed of Chautang strikes more to the south and runs parallel for some distance with the Saraswati and then turns westward. In ancient times, it used to feed the Ghagghar but now it disappears before joining it. The old bed is quite apparent as far as the Ghagghar.

The Rakshi is a small stream rising in the plains at Shahpur near Bilaspur. It flows south-west and joins the Chautang near Ladwa (Kurukshetra district). Its course is through a well defined bed with steep banks.

The Saraswati¹ is considered to be very sacred throughout the country, next only to the Ganga. It rises in the lower hills just beyond the border of the district in Sirmaur district and emerges in the plains at Ad Badri. A short distance below the hills, a branch stream connects it with the Somb. The peculiar characteristics of this stream is that it disappears at some places and then re-emerges. At a place it apparently loses itself in the Chautang and then reappears and flows onwards in south-westerly direction.

The Saraswati has been referred to as the river par excellence and occurs most frequently in the *Rigveda*. It seems to have been a holy stream of the Vedic age. It is possible that it was as large as the Satluj in the Vedic age, and actually reached the sea, as the *Rigveda* describes it as going down to the ocean. It

1. It is a Sanskrit word, meaning river of lakes or pools, the character it still maintains. During dry season it dries and becomes a succession of pools.

was the first of the Vedic rivers and its banks witnessed the development of the Vedic sacrifices. The Ghagghar was said to be a tributary of the Saraswati rather than the Saraswati being a tributary of the Ghagghar.¹

The Markanda.—The Markanda which drains the southern slopes of Dharti Dhar range (Himachal Pradesh), cuts through the Shiwalik range and enters the plains and the district near Kala Amb. The stream is joined by the Run *nadi*, the Begna *nadi* and the Nakti *nadi*. It flows towards the south and forming a southerly curve turns towards the south-west and enters the Kurukshetra district. The river channel which is broad between Kala Amb and Mullana becomes narrow south of Mullana. During the rainy season the river carries enormous water which causes flooding in its lower course.

The Run *nadi*, a tributary of the Markanda, rises in the Sirmaur district (Himachal Pradesh), and flows southward carrying a large body of water into the Markanda, which it joins near village Bari Rasaur. The Nakti *nadi* also known as Sadhaurawali or Sadadani is formed slightly above the Sadhaura town by the confluence of Sukar *rao*, Fandi *rao* and Khundra *rao*. It joins the Markanda just north of village Jafarpur. The Begna, a wide torrent, having two sources in Morni and Sirmaur (H.P.) hills, emerging in the plains near the village Fatehpur and flowing almost due south, falls in the Markanda west of Mullana. Like the Markanda, it is also subject to sudden and violent floods.

The Dangri (Tangri).—The Dangri (Tangri) stream rises in the Morni hills and flows in a southerly direction up to village Chhajju Majra where it is joined by the Baliali *nadi*. It further follows a southerly course running on the eastern side of the Ambala Cantonment. After crossing the Ambala cantonment and Ambala-Jagadhri railway line, it takes south-westerly direction. Near the villages of Segta and Segti, the torrent of Omfa and Amri (also locally known as Shahazadpurwali or Gadri) join the Dangri (Tangri). It is here that the Narwana branch of Bhakra Main Canal crosses the Dangri (Tangri) stream. Thereafter, the Dangri (Tangri) takes a westerly course up to village Niharsi where it turns due south and leaves the district to enter the Patiala district of Punjab.

The Dangri (Tangri) rising from Morni hills, used to flow on a southerly direction up to Panjokhra, a village in the north-east of Ambala from where it is separated into two main channels. These two channels still kept a southerly course running on either side of the Ambala Cantonment.² The Dangri

1. "Whatever the case may be regarding the Saraswati it is certain that the Ghagghar was main stream in this area. The Satluj and the Yamuna were tributaries to this river. Shifting of the courses of the rivers Satluj and Yamuna and some other indirect causes as deforestation of the Shiwalik hills, action of winds, erosion in the plains due to cultivation and over-grazing, etc., led to the desiccation of the Yamuna-Satluj divide."

(Gurdev Singh Gosal, Geography Department, Panjab University, Chandigarh.)

2. *Ambala District Gazetteer*, 1883-84, p. 7.

(Tangri) seems to have changed its course towards the close of the 19th century when the drainage was confined to the eastern channel.

The Baliali *nadi* rises in the southern slopes of Morni hills and joins the Dangri (Tangri) stream near village Chhajju Majra.

The Amri (also known as Shahazadpurwali or Gadri) is formed of water collected in plains during the rainy season. It starts near Rataur and flows south-west and takes the torrents of the Omla and joins the Dangri (Tangri) between the villages of Segta and Segti.

The Ghagghar.—The Ghagghar, another important river also traverses the district for some distance in the north-west. The river originates in Sirmaur district of Himachal Pradesh and enters the district near village Bariser where it takes a sudden rise towards the south and cuts across the northern ridge of the Morni hills. After flowing for about 4 kilometers, it again takes a sharp turn towards the north-west near village Pritnagar. From this village to village Thapli Sikh, a straight distance of about 10 kilometres, the river follows a tortuous course through a deep gorge. Near village Thapli Sikh, the river is joined by another tributary of the same name from the north. From this point up to the north of Ghagghar water gap, the river flows in an east-west direction along the Shiwalik range. The river is joined by the Jhajra and Koshallia *nadis* at this point and then it debouches on to the Panjab area (Patiala district, Punjab) through the Ghagghar water gap in the Shiwalik range. It traverses the district once again near Ambala City for a very short distance and then flows parallel to the district boundary outside the district. While in its upper course, the river contains some water throughout the year, in its lower course it is generally dry in summer and carries water only during the rainy season.

Apart from the streams which have been mentioned above, there are many other seasonal streams descending from the Shiwalik range. The streams are locally known as *nadis*, *nalas*, or *choes*. Water swells in these streams during the rains but they become dry afterwards. There are two major areas of concentration of these streams : the Pinjore Doon and the foot-hill zone. In the Pinjore Doon, these streams form a closely spaced sub-parallel drainage pattern. Streams are deeply entrenched with wall like vertical banks. Their beds are strewn with boulders and pebbles. Apart from the Jhajra and the Koshallia *nadis*, which join the Ghagghar, the Sirsa is another important stream in the area which flows towards the Satluj river. The Sirsa and the Jhajra flow closely parallel to each other in their upper course, but after reaching the foot of the Shiwalik hills, they adopt opposite directions. In addition to the *nadis* mentioned earlier, the area is infested with numerous minor *choes*. The physiography of the area, its land-use and alignment of transport lines are affected by gullies and *choes* which originate within the tract. Unlike the Hoshiarpur district of Punjab, the *choes* in this district do not disappear suddenly ; rather they join

some higher order stream and ultimately the Ghagghar, the Markanda or the Yamuna, forming a dendritic drainage pattern.

The two tiny lakes at an elevation of 620 metre above mean sea level near village Masiyun in the Morni hill tract are of little importance as these lakes neither feed any major stream nor are these being fed by any major river. Only a small stream from one of these lakes joins the Dangri (Tangri) *nadi*.

Despite the large number of drainage lines passing through the district, the area suffers from inadequate water resources. Canal irrigation, which is limited to a few small pockets in the south-western tip of Ambala tahsil, does not have much scope for extension because of undulating topography in a large part of the district. The Western Yamuna (Junna) Canal, which is taken out from the Yamuna at Tajewala, follows the old course of the river for a large part of its length in the district. It is also of little help to the district as it irrigates only a few villages in Jagadhri tahsil. Thus, wells and tubewells remain the major source of irrigation in the district.

GEOLOGY

The northern part of the district constitutes tertiary rocks including limestone, sandstone, shale and boulder conglomerate and these form low lying hill ranges known as the Shiwalik foothills. The southern part of the district is occupied by the Indo-Ganga alluvium comprising clay, silt and sand.

The following geological succession is met within the district :—

Recent and Sub-recent	—	Alluvium, <i>Doon</i> gravel and terrace formations
	(Boulder— (Conglomerate (Stage	Gravel bed, boulder conglomerate in the sandy matrix
Shiwalik Formations	(Pinjore Stage—	Soft sandstone with light orange to purple clay
	(Nahan Stage—	Grey, micaceous sandstone with pink clays
	(Kasauli Stage—	Hard, massive sandstone with grey or violet shales
Sirmaur Formations	(Dagshai Stage—	Sandstone, occasionally varved with purple shale
	(Sabathu Stage—	Splintery, grey shales, sandstone, impure shelly limestone
Unconformity		
Tundapathar Formations (Pre-Tertiary)		Basic dykes and sills, unfossiliferous, calcareous and carbonaceous slate quartzite dolomite beds and limestone

The pre-tertiary Tundapathar series of rocks crop out in the Morni hills extending from Malla to Sherla and form an important limestone bearing horizon with cement grade limestone occurring as lentoid bodies, having thickness between 6 and 30 metre.

The Sabathu Series comprise olive-green and purple, oily looking gypseous shales, with some lenticular band of impure limestone and sandstone, the latter occurring principally near the top of the formation. The shales are characterised by minute, irregular, ramifying joints and by planes of movement often filled by calcite. The limestone may be shelly, being made up mostly of broken oyster shells with rare nummulities, or they may be unfossiliferous.

The variegated shales and sandstones of the Dagshai and Kasauli Stages rise to picturesque hill slopes, particularly along sections both natural and artificial.

The Dagshai and Kasauli beds are followed by the rocks of the Shiwalik formations, the lower part of which is represented in this area, by a thick sequence of grey, micaceous sandstone with purple shale bands. The upper Shiwaliks are represented by the soft, greyish white sand rock with subordinate orange or pinkish clay of the Pinjore Stage and the huge boulder conglomerate horizon composed of rounded boulders of the rocks of the Himalayan chain.

It is important to note that these two horizons of the upper Shiwaliks have yielded many vertebrate fossils of Proboscidea, Equidae, Suidae, Bovidae, Carvidae, Rhinocerotidae, Carnivora and Primate families.

Mineral Occurances

Building material.—Massive sandstone in Kasauli, Dagshai and Nahan Stages occurring near Kalka is a good source for building material and also for manufacture of stone bowls (*kundis*).

The recent gravel beds and terraces along most of the hill streams emerging within this district, especially of the river Ghagghar near Panchkula, yield almost inexhaustible supply of building material, potters clay and stone.

Clay.—Some good quality potters clay has been reported from Pinjore. Red clay bands measuring in thickness from one to five metre are exposed in the lower horizon of Pinjore Stage in the Kalka tahsil. These are plastic clays and are hard when dry. These clays show shrinkage of 8 per cent at 1150° C and bear the physical properties which render them suitable for the manufacture of roofing and decorative tiles and rough and rustic wares.

Limestone.—Two bands of limestone, one about 13 metre thick and the other about 25 metre thick, both extending over 500 metre have been located at Tundapathar. It is very high grade limestone with an average of 93 per cent calcium carbonate and low in magnesium oxide. The estimated reserve is about 6 lakh tonnes.

A band of thinly bedded Sabathu limestone, about 5 metre thick, occurs at Barun in Narayangarh tahsil. A band of limestone about 20 metre thick and about 1.2 kilometres long occurs at Kharag. The total reserve in the area is estimated at 50 lakh tonnes of good quality limestone.

The largest deposit of this area occurs at Ramsar and Sherla (Narayangarh tahsil). The limestone is well bedded, about 30 metre thick and extends for about 2.4 kilometres. The reserve is estimated at about 120 lakh tonnes. The limestone belt extends to Malla (Kalka tahsil), Jonpur, Dabsu, Ambri and Jabial in Narayangarh tahsil.

Saltpetre.—A small quantity of saltpetre is extracted from the soils around Ambala and Barara.

Mineral water (springs).—At Pinjora, two springs with chalybeate and sulphurous water have been reported.

GROUND-WATER

The ground-water in the district occurs under confined and semi-confined conditions. The depth of water level varies greatly in the area immediately to the south of the Shiwalik hills. It ranges between 2 and 47 metre, maximum being towards the hills. The water level in the area further south ranges between 1.5 and 12 metre, but generally it varies between 4 and 8 metre.

The shallow tubewells are usually constructed down to a depth of 10 to 45 metre. However, at some places, as in Nagla-Mullana belt, tubewells have been drilled to a depth of 90 metre. Shallow tubewells usually tap ground-water from single aquifer. The deep tubewells generally range in depth between 91 and 185 metre but at few places tubewells down to 445 metre have also been constructed.

Ground-water is generally fresh and suitable for domestic and irrigation purposes.

SEISMICITY

Seismically Ambala district lies in a region where earthquakes of moderate to great intensity have been experienced in the past. Being situated very close to the Himalayan Boundary Fault Zone, it is prone to earthquake shocks originating there. History of the past two hundred years for which records are available shows that during the Kangra earthquake of 1905, Ambala district experienced an intensity of VII—VIII M.M. (Modified Mercalli Intensity Scale of 1951).¹

1. (i) Scale of VII M.M. corresponds to—Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor-cars.

(ii) Scale of VIII M.M. corresponds to—Damage slight in specifically designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments and walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Disturbs persons driving motorcars.

A committee of experts under the auspices of Indian Standard Institution prepared seismic zoning map of India, where Ambala district has been placed in zone IV where a maximum seismic intensity VIII M.M. is likely to reach in future earthquakes.

Taking into consideration the above factors and also the fact that the extreme cases of high intensity occur only at long intervals, it is felt that a provision of seismic ground acceleration of 10 per cent gravity (.10 g) may be made for engineering structures founded on well consolidated soil. For weaker foundations and important structures, the seismic factor may be suitably increased.

FLORA

The district provides a favourable habitat for the growth of rich and abundant vegetation due to the availability of rainfall and elevations extending up to 1,500 metre above mean sea level. The plains and foothills contain mainly tropical type of vegetation. Above 650 metre elevation, sub-tropical vegetation is met with.

Alluvial Plains

Shisham (Dalbergia sissoo), *Kikar (Acacia nilotica)* and mango (*Mangifera Indica*) are important tree species grown in the alluvial plains. *Safeda (Eucalyptus hybrid)* has been introduced on a big scale since 1963 in forest areas as well as on private lands. The wood of this tree is used for the manufacture of paper pulp and for fuel. It has been extensively planted on forest strips and also in the cultivated lands near Jagadhri, Sirsagarh, Sherpur, Lehroundi, etc.

Besides, the following species are also occasionally met with in the plains : *Jamun (Syzygium cumini)*, *Semal (Bombax ceiba. Syn. Salmalia malabarica)*, *Pipal (Ficus religiosa)*, *Barh (Ficus bengalensis)*, *Neem (Azadirachta indica)*, mulberry (*Morus alba*), *Siris (Albizia procera)*, etc.

Most common among the shrubs are *Adhatoda vasica*, *Vitex negundo*, *Carissa opaca*, *Ipomees carnea*, *Capparis*, *Zizyphus*, *Lantana*, *Ricinus communis*, *Calotrop Solanum indicum*, etc. Herbs like *Cannabis sativa*, *Cassia tora*, *Xanthium strumarium* make their appearance during hot and rainy season and then die back.

Foothills and Hills

The natural vegetation is mainly of forest growth and its degradation stages. The forest types occurring in these areas are 'Northern Tropical Dry Deciduous Forests' and 'Sub-Tropical Forests'. The latter type occurs only in higher elevations (above 650 metre) and the main sub-tropical species is

Chil (*Pinus roxburghii*). The former occurs in the Shiwalik hills and sub-Himalayan tract. These forests contain a number of miscellaneous hard wood species like *Chhall*, *Khair*, and *Jhingan*, etc. Growth is more dense on northern and north-eastern slopes. In more moist areas where soil is deep, this dry deciduous type forms into pure bamboo forest. On outer hills where the incidence of grazing and biotic interference is considerable, this dry deciduous type degenerates into scrub forest. The main tree species found are *Chall* (*Anogeissus latifolius*), *Khair* (*Acacia catechu*), *Jhingan* (*Lannea coromandelica*), *Amaltas* (*Cassia fistula*), *Sain* (*Terminalia alata* Syn. *terminalia tomentosa*), *Bahera* (*Terminalia bellirica*), and *Dhak* (*Butea monosperma*). *Sal* (*Shorea robusta*) occurs on the northern slopes of Shiwalik hills in Kalesar tract. The Kalesar reserve forest is the only *Sal* forest in the whole of the Haryana State. Other tree species of occasional occurrence are *Sandhan* (*Ougeinia ougeinensis*), *Phaldu* (*Mitrageya parvifolia*), *Semul*, *Amla*, *Kachnar* (*Bauhinia purpurea*, *Bauhinia racemosa*), *Papri* (*Holoptelea integrifolia*), *Toon* (*Toona ciliate* Syn. *Cedrela toona*), *Rohini* (*Mallotus Philippensis*) etc. Among small trees and shrubs *Nyctanthes tarbortristis*, *Limonia acidissima*, *Randia*, *Rhus parviflora*, *Murraya paniculata* (Syn. *Murraya exotica*), *Murraya koenigii*, *Holarrhena anti lysenterica*, *Carissa Opaca*, *Adhatoda vasica*, *Lantana camara*, etc. are met with.

The main climbers in these areas are *Bauhinia vahlii*, *Mimosa rubicaulis*, *Zizyphus oenoplia*, *Clematis roylei* (Syn. *Clematis nutans*), *Vitis semicordata* and *Cuscuta reflexa*, etc.

A large number of grasses are also met with. *Babbar* (*Eulaliopsis binata*) is an important grass growing naturally in many areas. This is used for manufacture of paper. *Sarala* (*Chrysopogon fulvus*. Syn. *Chrysopogon montanus*) is an important fodder grass growing in the Shiwalik hills. *Heteropogon contortus*. *Dub* (*Cynodon dactylon*), *Palwan* (*Dichanthium annulatum*), *Aristida depressa* and *Sporobolus* species, etc. are other important grasses.

Chil (pine) (*pinus roxburghii*) grows in patches in the Morni hill area. This is the lower limit of the natural habitat of *Chil* (pine) and hence the growth is not comparable to that of the higher hills. Some poorly-grown trees of *Chil* are found in Darpur forest also. *Ban* (oak) (*Quercus indica*) occurs in the Morni hills on the right side of the Ghagghar in moist pockets along northern slopes. The extent of the area is very small near Tipra. Bamboo (*Dendrocalamus strictus*) forms extensive patches in the dry deciduous forests.

A number of medicinal plants are also found in Ambala district, some of which are *Bahera* (*Terminalia bellirica*), *Harar* (*Terminalia chebula*), *Amla* (*Emblia officinalis*), *Kamela* (*Mallotus philippensis*), *Eucalyptus citriodora*, *Cordia*

dichotoma (Syn. *Corda myxa*), *Amaltas* (*Cassia fistula*), *Holarrhena antidysenterica*, *Calotropis procera*, etc. Fodder grasses like *Chrysopogon*, *Heteropogon*, *Cynodon dactylon*, *Dichanthium amulatum*, etc. occur in forest area.

A number of ornamental plants like *Hibiscus Euphorbia pulcherrima*, *Delonix regia* (Syn. *Poinciana regia*), *Lagerstroemia indica*, *Lawsonia inermis* (syn. *Lawsonia alba*), *Bougainvillaea*, *Bambusa vulagris* and *Jacaranda* can be seen in gardens, rest houses and along the roads.

FAUNA

Mammals

The primates, the highest group of mammals are represented by *Macaca mulata* (Zimmermann), the rhesus macaque or bandar and *Presbytis entellus* (Dufresne), the common langur.

Panthera tigris (Linnaeus), the tiger and *Panthera pardus* (Linnaeus), leopard are no more seen in the district.

Some other carnivorous animals which may be seen in the district are *Felis chaus* (Guldenstaedt), the jungle cat, *Viverricula indica* (Desmarest), the small Indian civet; *Herpestes edwardsi* (Geoffroy), the common mongoose, *Canis auris* (Linnaeus), giddar; and *Vulpes benghalensis* (Shaw), the Indian fox.

Only one species of shrew viz. *Suncus murinus* (Linnaeus) and two species of bats, *Scotophilus heathi* (Horsefield), the common yellow bat and *Hesperopterus tickelli* (Blyth), the tickells bat, are found in the district.

The five striped palm squirrel or *gilheri*, *Fimmbulus pennati* (Wranghton), the Indian porcupine or *sahi*, *Hystrix indica* kerr, the Indian gerbille, *Tatera indica* (Hardwicke); the common house rat, *Rattus rattus* (Linnaeus); the house mouse, *Mus musculus* (Linnaeus) and the Indian hare *Lepus nigricollis* (Cuvier) comprise the rodent fauna though not very commonly seen.

Birds

Game Birds.—A large number of game birds are found in the district. Some of these birds are residential while others visit the district in winter. These birds are combduck, *Sarkidiornis melanotos melanotos* (Pannant); cotton teal, *Nettapus coromandelianus coromandelianus* (Gmelin); spotbill duck, *Anas poecilorhyncha* (Forester), large whistling teal, *Dendrocygna bicolor* (Viellot); tree duck, *Dendrocygna javanica* (Horsefield); dabchick, *podiceps ruficollis capensis* (Salvadori); eastern greylag goose, *Anseranser rubrirostris* (Swinhoe); Brahminy duck, *Tadorna ferruginea* (Pallas); common shelduck, *Tadorna tadorna* (Linnaeus); pintail, *Anas acuta* (Linnaeus); common teal, *Anas crecca crecca* (Linnaeus); mallard *Anas platyrhynchos* (Linnaeus); gadwall,

Anas strepera strepera (Linnaeus); wigeon, *Anas penelope* (Linnaeus); blue-winged teal, *Anas querquedula* (Linnaeus); shoveller, *Anas clypeata* (Linnaeus); common pochard, *Aythya ferina* (Linnaeus); ferruginous duck, *Aythya nyroca* (Guldenstadt); and tufted duck, *Aythya fuligula* (Linnaeus).

Wherever there are sizeable tanks and other stretches of water, lakes and rivers, these birds can be seen along with kingfishers and waders like sandpipers and stints.

In addition to water birds, other game birds like pigeons and doves are common in the district. Bengal green pigeon, *Treron phoenicoptera* (Latham) is found in the vicinity of villages chiefly on *ficus* trees and blue rock pigeon, *Columba livia* (Gmelin) occurs in almost all the villages. Western turtle dove, *Streptopelia orientalis meena* (Sykes); Indian ring dove, *Streptopelia decaocto decaocto* (Frisvaldsky); Indian spotted dove, *Streptopelia chinensis suratensis* (Gmelin); Senegal dove, *Streptopelia senegalensis cambayensis* (Gmelin); and Indian emerald dove, *Chalcophaps indica indica* (Linnaeus) are generally found in cultivated areas.

Sandgrouses namely, Indian sandgrouse, *Pterocles exustus orlangeri* (Neumann) and black-bellied sandgrouse, *Pterocles orientalis orientalis* (Linnaeus) are resident birds while large pintail sandgrouse *Pterocles alchata* (Gmelin) and spotted sandgrouse, *Pterocles senegallus* (Linnaeus) visit the district only in winter. Their flocks, large and small, regularly visit some favourable waterholes.

Partridges and quails are also common in the district. Indian black partridge, *Fringilla asiatica asiatica* (Bonaparte) and grey partridge, *Fringilla pondicerianus interpositus* (Hartert) are common. Grey quail, *Coturnix Coturnix* (Linnaeus) is a seasonal winter visitor, while black-breasted or rain quail, *Coturnix coromandelica* (Gmelin); jungle bush quail, *Perdica asiatica* (Punjabi); whistler and rock bush quail, *Perdica argoondah* (Sykes) are resident species.

Besides birds like eastern larg egret, *Egretta albamodesta* (J.E. Grey); median egret, *Egretta intermedia intermedia* (Wagler); little egret, *Egretta garzetta garzetta* (Linnaeus) affects inland water marshes, *jhels*, etc. Cattle egret, *Bubulcus ibis coromandus* (Boddaert) can be seen moving along with grazing cattle.

The other common birds which can be seen in the district are large Indian parakeet, *Psittacula eupatria* (Linnaeus), rose ringed parakeet, *Psittacula krameri boorealis* (Neumann); Indian house sparrow, *Passer domesticus indicus* (Jardine and Selby); blue-checked bee-eater, *Merops superciliosus* (Linnaeus); coppersmith, *Megalaima haemacephala*

indica (Latham); Indian golden oriole, *Oriolus oriolus kundoo* (Sykes); pied crested cuckoo, *Clamator jacobinus serratus* (Sparman); koel, *Eudynamys scolopacea scolopacea* (Linnaeus); crow-pheasant, *Centropus sinensis* (Stephens); red-vented bulbul, *Pycnonotus cafer* (Linnaeus); white eared bulbul, *Pycnonotus leucogenys* (Gray); verditer flycatchers, *Muscicapa thalassina thalassina* (Swainson); Indian magpie robin, *Copsychus svecicus svecicus* (Linnaeus); Indian purple sunbird, *Nectarinia asiatica asiatica* (Latham); red-munia, *Estrilda amendava* (Linnaeus); Indian spotted munia, *Lonchura punctulata punctulata* (Linnaeus), crested bunting, *Melophus lathami*, (Grey), etc.

Besides such attractive birds as hoopoe, *Upupaepos* (Linnaeus), Indian white eye or baboona, *Zosterops palpebrosa palpebrosa* (Temminck) are also seen in and around villages.

Birds of Economic Importance.—Scavengers like pariah kite, *Milvus migrans* (Boddaert), Brahminy kite, *Haliastur indis indus* (Boddaert); white-backed vulture, *Gyps bengalensis* (Gmelin); tawny eagle, *Aquila rapax vindhiana* (Franklin); Indian jungle crow, *Corvus macrorhynchos culniture* (Sykes) Indian house crow, *Corvus splendens splendens* (Vieillot), etc. keep the district cleared of dead animals by feeding on them. The Indian scavenger vulture, *Neophron percnopterus ginginianus* (Latham), besides feeding on dead animals, consumes a large quantity of human excreta. Predators like black winged kite, *Elanus caeruleus vociferus* (Latham), Indian shikra, *Accipiter badius dussumieri* (Temminck); laggar falcon, *Falco biarmicus* (Temminck), kestrel, *Falco, tinnunculus* (Linnaeus) are resident birds of the district. Others like pale harrier, *Circus aeruginosus aeruginosus* (Linnaeus), eastern steppe eagle, *Aquila nipalensis nipalensis* (Hodgson) etc. visit the district in winter. These along with spotted owl *Athene brama* (Temminck), eagle owl, *Bubo bubo* (Linn.) keep a check on the population of not only rodent pests but also various insect pests by consuming them.

The majority of birds found in the district feed on insects and caterpillars injurious to agriculture. Swifts such as Indian house swift, *Apus affinis affinis* (J.E. Gray); Indian palm swift, *Copsiurus parvus batasiensis* (J.E. Gray) and swallows like western swallow, *Hirundo rustica rustica* (Linnaeus); Indian wiretailed swallow, *Hirundo smithi filifera* (Stephens) consume insects as their staple diet. Shrikes or "butcher birds" as they are popularly called feed upon a considerable quantity of insects. Some other insects eating birds are king crow, *Dicrurus adsimilis albirectus* (Hodgson); Brahminy myna, *Sturnus pagodarum* (Gmelin), Indian pied myna, *Sturnus contra contra* (Linnaeus); bank myna, *Acridotheres ginginianus* (Latham), babblers, warblers and fly-catchers of various species Larks and wagtails feed

upon a considerable amount of worms in addition to insects. Rosy parrot and common Indian starling which are winter visitors may specially be mentioned for their role in destroying numerous insects including grasshoppers on a large scale and thus helping in saving crops to some extent.

Reptiles

Snakes.—Both the poisonous and non-poisonous varieties of snakes are found in the district. The poisonous snakes are *Bungarus caerlus* (Schneider) the common Indian krait; *Vipera russelli* (Shaw), the Russel's viper; *Echis Carinata* (Schneider), the saw-scaled viper, and *Naja naja* (Linnaeus), the cobra. The non-poisonous snakes are *Typhlops norrectus stoliczka*, the blind snake; and *Erux johni johni* (Russell) the John's sand boa.

Lizards.—The common lizards of the district are *Hemidactylus flaviviridis* (Ruppell), the house lizard found in the buildings, and *calotes versicolor* (Daudin), the blood sucker or garden lizard found in the hedges and bushes.

Tortoise.—The commonly found tortoise is *Geoclemys hamiltoni* (Gray), *kachhua*.

Amphibians

Frogs.—The common frogs of the district are *Rana tigrina* (Daudin), the bull frog; *Rana limnocharis* (Weigmann), the paddy-field frog, and *Rana cyanophlyctis* (Schneider), the skipping frog.

Toads.—The toads are *Bufo andersoni* (Boulenger), the Anderson's toad, and *Bufo melanostictus* (Schneider), the common Indian toad.

Fishes.—The fishes of commercial importance are the carps, the catfishes and murrels. The carps are *Labeo rohita* (Hamilton), the *rohu*; *Labeo bata* (Hamilton), the *bata* or *bhangon*; *Cirrhinus mrigala* (Hamilton), the *mirgal*, and *Cirrhinus reba* (Hamilton), the *mori* or *safed mirgal*. The catfishes are *Aorichthys Seenghala*, *singhara* and *wallago attu* (Bloch and Schneider), the *mullee*. The murrels are *Channa marulius* (Hamilton), the *sol*; *Channa punctatus* (Bloch), the *douli* or *karrar* and *Channa striatus* (Bloch), the *soul*.

The hill stream fishes are *Labeo dyocheilus* (McClelland), the *butal* or *Kalimachhi*; *Labeo dero* (Hamilton), the *gidl* and *Tor putitora* (Hamilton), the *mahseer*.

CLIMATE

The climate of the district is characterised by a very hot and dry summer, south-west monsoon season and a bracing cold season. The year may be divided into four seasons. The period from about the middle of November to February is the cold season. This is followed by the summer season from March to about the end of June. The south-west monsoon season commences

late in June and continues up to about the middle of September. The period from mid-September to the middle of November is the post-monsoon or transition season.

Rainfall.—Records of rainfall in the district are available for four stations for period exceeding 100 years. The details of rainfall at these stations and for the district as a whole are given in Table I and II of Appendix. The average annual rainfall in the district is 985.1 mm. About 81 per cent of the annual normal rainfall in the district is received during June to September; about 11 per cent is received in the winter month of December to February. The rainfall in the district generally increases from the south-west to the north-east and varies from 905.7 mm at Ambala to 1,063.2 mm at Dadupur. The variation in the annual rainfall in the district from year to year is appreciable. During a period of 50¹ years from 1901 to 1950, the highest annual rainfall amounting to 167 per cent of the normal occurred in 1942. The lowest rainfall which was 48 per cent of the normal was received in 1918. In the same period, the annual rainfall in the district was less than 80 per cent of the normal in 10 years, two of them being consecutive. Considering the annual rainfall at the individual stations, instances of two consecutive years of such low rainfall are quite common and occurred thrice at Ambala, twice each at Jagadhri and Dadupur and once at Narayangarh. Three consecutive years of low rainfall occurred once at Dadupur and 4 consecutive years occurred twice at Ambala. It will be seen from Table II of Appendix that the annual rainfall in the district was between 600 and 1,400 mm in 47 years out of 50 years.

On an average there are 46 rainy days (i.e., days with rainfall of 2.5 mm) in a year in the district. This number varies from 43 at Jagadhri and Ambala to 49 at Narayangarh. The heaviest rainfall in 24 hours recorded at any station in the district was 444.5 mm at Dadupur on July 2, 1956.

Temperature.—There is a meteorological observatory at Ambala. The records of this observatory may be taken as representative of the climatic conditions in the district in general. From March, temperatures increase rapidly. May and June are generally the hottest months in the year with the mean daily maximum temperature at about 41° C and the mean daily minimum at about 25° to 27° C. The heat in the summer season is intense. Scorching dust-laden winds which are a fairly common feature in the latter part of the summer season contribute much to discomfort. An occasional dust or thunder storm brings some temporary relief. With the advance of the monsoon by about the end of June, there is a slight drop in the day temperature but the nights still continue to be quite warm. The weather during the monsoon season

1. The estimates based on a sufficiently large number of years can be considered as stable for a fairly long time to come.

remains oppressive in between the rains due to moisture in the air. After the withdrawal of the monsoon by about mid-September, there is a slight increase in the day temperature. However, the nights become progressively cooler. The decrease in temperature is rapid from November. January is generally the coldest month with the mean daily maximum temperature at about 21°C and the mean daily minimum at 7°C. During the winter season, cold waves sweep the district in the wake of passing western disturbances and the minimum temperature drops down occasionally to about a degree below the freezing point of water. On such occasions, frosts are a likely phenomenon in the district.

The highest maximum temperature recorded at Ambala was 47.8 C on June 17, 1923 and May 29, 1944. The lowest minimum temperature at Ambala was -1.1° C on January 19, 1947.

Humidity.—Relative humidity is high, about 70 per cent during the monsoon. During the rest of the year the atmosphere is generally dry. The driest part of the year is the summer season when during afternoons the relative humidity is lowest, about 25 per cent.

Cloudiness.—The skies are generally moderately to heavily clouded and occasionally overcast during the monsoon season and for brief spells of a day or two in association with the passing western disturbances during the cold season. The skies are mainly clear or lightly clouded during the rest of the year.

Winds.—Winds are generally light in the district. In the post-monsoon and cold seasons, winds are predominantly from the north-west. In March and April easterly to south-easterly winds also blow on some days. In the period May to September, easterlies and south-easterlies predominate but on many days, north-westerly winds blow in the afternoons.

Special Weather Phenomena.—The district is scarcely affected by monsoon depressions. During the period of January to March, western disturbances affect the district causing rain, often associated with thunder and gusty winds. Rain during the monsoon season is more often associated with thunder. Dust-storms occur occasionally in the hot season. Fogs occur occasionally in winter.

The normal of temperature and relative humidity, mean wind speed and special weather phenomena respectively for Ambala district are given in Tables III, IV and V of Appendix.

CHAPTER-II

HISTORY

ANCIENT PERIOD

The name of the district is derived after its headquarters Ambala. It is surmised to have been founded by one Amba Rajput during the 14th century.¹ In any case there is no reason to doubt the antiquity of the region which is well established on the basis of the discovery of numerous pre-historic, proto-historic and historical sites. Several of its towns and villages such as Sugh, Jagadhri, Kapal Mochan, Sadhaura and Pinjore are mentioned in ancient Indian literature.²

The district was explored earlier by A. Cunningham and C. Rodgers and later by B.B. Lal and many others.³ On the basis of these explorations and excavations it is possible to give an outline of the chronological sequence of the earliest cultures of the district.

The earliest inhabitants of the district were a primitive people using stone tools of the lower palaeolithic age such as choppers, cores, unworked flakes, scrapers, cleavers and hand-axes. These have been discovered from Dera Kharoni, Mansa Devi (Balaspur), Pinjore, Suketri and from the region extending from Pinjore to Nalagarh.⁴ Unfortunately, this district has not so far yielded any

1. *Ambala District Gazetteer*, 1923-24, p. 130.

2. *Taittiriya Aranyaka*, 5.1.1; *Mahabharata, Vanaparva*, 81; *Vamna Purana*, Saromahatmya; *Padma Purana*, 1,27, Panini's *Ashtadhyayi*, etc.

3. For detailed account of these explorations and excavations, reference may be made to the following:

- (i) A. Cunningham, *Archaeological Survey of India, Reports*, 1862-65, 1878-79.
- (ii) C. Rodgers, *Archaeological Survey of India, Reports of the Punjab Circle*, 1888-8
- (iii) Suraj Bhan, (a) *Excavations at Mithkathal (1968) and other Explorations in the Sutlej Yamuna Divide, Kurukshetra*, 1975.
(b) Sughna or Sugh, An Old Capital of Ancient Punjab; *Vishveshvarananda Indological Journal*, Hoshiarpur, Vol. I, No. 1, 1969
- (iv) Suraj Bhan (a) *New Discoveries in Northern Haryana, Man and Environment*, and Jim G. Shaffer, Vol. II, 1978.
- (v) R.C. Agrawala, *Early History and Archaeology of Kurukshetra and Ambala Divisions, Indian Historical Quarterly*, Vol. XXXI, 1955, pp. 293-322 and Vol. XXXII, 1956, pp. 15-35.
- (vi) G.C. Mohapatra, *Preliminary Reports of the Explorations and Excavations of Stone Age Sites in Eastern Punjab, Bulletin of the Deccan College Research Institute*, 1966, pp. 221-37.
- (vii) Manmohan Kumar, *Archaeology of Ambala and Kurukshetra Districts, Haryana*, 1978, MSS, Kurukshetra University, Kurukshetra.

4. G. C. Mohapatra, *op. cit.*, pp. 221-37; Manmohan Kumar, *op. cit.*, pp. 240-243.

pre-Harappan or mature Harappan site. Though Harappan pottery along with other pottery has been recovered from four places in the district, it is not possible to draw any inference on this slender evidence. The position in respect of late-Harappans (c. 1700 B.C.-1300 B.C.) has been satisfactory whose pottery has been recovered from as many as twenty-three places in the district. Actually no excavation of any late-Harappan site has so far been undertaken but on the basis of evidence found from the excavation in the neighbouring sites of Daulatpur, Raja Karna Ka Quila and Bhagwanpura in the Kurukshetra district, it may be surmised that the authors of this culture built mud and mud-brick houses and used thick sturdy well burnt red ware.

With the advent of the Aryans sometime in the later half of the second millenium B.C. (generally associated with the people using Painted Grey Ware pottery) began a new era in the history of the district which is supported by literary evidences at successive stages. The Aryans settled in the land of their sacred rivers, the Saraswati, the Drishadvati and the Yamuna. Their prominent tribes, the Bharatas, Purus and Kurus fought battles here, performed *yajnas* (sacrifices) and recited and composed Vedic hymns.¹ The Ambala area was included in the kingdom of the Pandavas and their successors, the Parikshitas,²

The earliest literary reference to the region comprising the Ambala district is perhaps in the *Taittiriya Aranyaka* which mentions Turghna as the bordering region towards the north of Kurukshetra.³ This locality identified with (Shrughna or Sugh) also finds mention in Panini.⁴ During the sixth century B.C. it came under the influence of Buddhism. According to the testimony of Hiuen Tsang,⁵ Tathagata (Buddha) in former days preached here the law to convert men.

Judging from the discovery of Mauryan terracottas and Northern Black Polished Ware at several places we conclude that it formed a part of the Mauryan empire.⁶ The people of the district may possibly have assisted Chandragupta Maurya in the war against the Greeks. Its importance as a stronghold of Asoka's dominion is confirmed by Topra edict⁷ and stupas at Sugh⁸ and Chaneti⁹ (3rd Century B.C.). In his account of Su-lo-ki-na, Hiuen Tsang

1. According to Hopkins and Keith, the bulk of the hymns were composed in the land around Saraswati, south of modern Ambala. (R.C. Majumdar, *The History and Culture of the Indian People, The Vedic Age*, 1965, p.248.)

2. This suggestion is based on the fact that under Janamejaya the Kuru kingdom included Takshasila in the extreme north-west.

3. *Taittiriya Aranyaka*, 5.1.1; see also P.V. Kane, *History of Dharamshastra*, IV, p. 681 fn. 1541.

4. V.S. Agrawal, *India as known to Panini*, Lucknow, 1953, p. 431.

5. Samuel Beal (Trans.), *Buddhist Records of the Western World*, p. 187.

6. Manmohan Kumar *Archaeology of Ambala and Kurukshetra Districts*, Haryana, 1978, MSS, Kurukshetra University, Kurukshetra, p. 165 f.

7. E. Hultzsch, Delhi Topra Pillar Edict. *Corpus Inscriptionum Indicarum*, Vol.I, pp. 119-37.

8. A. Cunningham, *Archaeological Survey of India, Reports*, 1862-65, p. 227.

9. Devendra Handa, Mauryan Stupa at Chaneti, *Vishveshvarananda Indological Journal* IV, Pt. 1, pp. 75-9.

mentions Asokan stupa containing the hair and nail relics of Tathagata, and to its right and left stupas containing the mortal remains of his famous disciples, Sariputta and Maugalayayana.¹ The Topra edict, raised at a village of that name in the Jagadhri tahsil of the Ambala district on the Yamuna stood there until it was removed by Firoz Shah in A.D. 1356² and fixed at Kotla Firoz Shah in Delhi. It bears Asoka's seven edicts of which the last one can be distinctly deciphered while other six have been damaged. These edicts bear testimony to the king's idea of morality, the appointment of special officers and his proclamation for the material and spiritual happiness of the people.³ It is well known that Asoka located his inscriptions at a few chosen places in his vast empire. The places selected were obviously those which were traditionally frequented by large number of people as religious centres. The selection of a site in Ambala district supports the fact of Brahmavarta having continued as a cultural centre from the Vedic times.

The discovery of Sunga terracottas⁴ suggest that they held this area. An interesting find of this period besides silver and gold ornaments and terracotta figurines, is a Sunga terracotta plaque depicting a child learning alphabets (in early Brahmi script) on a wooden plate.⁵ Its inclusion in the Indo-Greek kingdom of the north-west is proved by the discovery of the coins of Appolodotus and Antimachus from Amadalpur (Jagadhri tahsil), of Straton and Menander from Chhoti Krori and Sadhaura (Narayangarh tahsil).⁶ Several coins of Menander have also been recovered from Sugh.⁷ The district has also yielded coins of Indo-Parthian Gondophernes (from Ambala and Narayangarh) and a coin of Mahakshatrpa Rajuvala (from Ambala).⁸

1. Samuel Beal, (Trans.) *Buddhist Records of the Western World*, p. 187.

2. Shams-i-Siraj, the historian of Firoz Shah, vividly describes its installation on its present site. (Elliot and Dowson, *History of India as told by its own Historians*, Vol. III, 1970, pp. 350-351); A. Cunningham, *Archaeological Survey of India, Report*, IV, 1878-79, pp. 78-79.

3. E. Hultzsch, Delhi Topra Pillar Edict, *Corpus Inscriptionum Indicarum*, Vol. I, pp. 134-135.

4. Manmohan Kumar, *Archaeology of Ambala and Kurukshetra, Districts, Haryana*, 1978, Mss Kurukshetra University, Kurukshetra, p. 164.

5. Suraj Bhan, 'Recent Archaeological Investigations and their contribution to the cultural History of Haryana', *Sources of the History of India*, (Ed.) S.P. Sen, Calcutta, 1979, Vol. II, p. 115.

6. Manmohan Kumar, *Op. cit.*, p. 186.

7. Suraj Bhan, Report of Excavation at Sugh (1964 and 1965), *Journal of Haryana Studies*, IX, Pt. 1-2, 1977, p.46.

8. C. Rodgers, *Archaeological Survey of India, Report of the Punjab Circle*, 1888-89, 'List of Coins', p. 2.

The discovery of Kushana bricks at several places and the coins of Vasudeva (found at Panjlasa in Narayangarh tahsil)¹ and the recovery of abundant Kushana finds in the neighbouring districts justify the conclusion that this district was included in the Kushana empire which extended to Mathura and Varanasi in the east. The region of Buria, Sugh and Jagadhri has yielded several coins of Amoghabhuti, a chieftain of the famous Kunindas.² Kuninda coins were procured also from Narayangarh and Sadhaura.³ The Kunindas, who were settled between the Satluj and the Yamuna, were the collaborators of the Yaudheyas (another famous republican people, settled over a larger area covering parts of Punjab, Haryana, Rajasthan and western Uttar Pradesh), in ousting the foreign Kushanas beyond the Satluj.⁴ Some of the Kuninda coins are cast on Kushana model bearing the figure of Siva with trident and the symbols of deer, tree and river.⁵ In course of time the Kunindas lost their independent existence probably because of their fusion with the expanding republic of the Yaudheyas whose coins have been found almost all over Haryana. This receives some support from the Prayaga Prasasti (Allahabad Pillar Inscription) of Samudragupta in the 4th Century A.D. which does not mention the Kunindas, though it refer to the Yaudheyas.⁶

According to R.C. Majumdar, the region between Lahore and Karnal (which included also the Ambala district) formed a part of Samudragupta's empire.⁷ Gupta hold over the region continued under Chandragupta-II Vikramaditya whose expedition to Punjab and Bactria is recounted in the Mehrauli Pillar Inscription and whose silver coins are found in plenty all over the eastern Punjab.⁸ During his exploration, Cunningham has found a stone inscription (on the wall of a Sikh temple) at Kapal Mochan and also some ornamented

1. Manmohan Kumar, *Archaeology of Ambala and Kurukshetra Districts, Haryana*, 1978, MSS, Kurukshetra University, Kurukshetra, p. 36.

2. C. Rodgers, *Archaeological Survey of India, Report of the Punjab Circle, List of Coins*, pp.3-4; A. Cunningham, *Archaeological Survey of India, Reports*, 1878-79, pp. 137-139.

3. C. Rodgers, *Archaeological Survey of India; Report of the Punjab Circle, 1888-89, 'List of Coins'*, pp. 3-4.

4. Buddha Prakash, *Haryana Through the Ages*. Kurukshetra, 1970, p. 19.

5. *Ibid.*

6. Prayaga Prasasti, line 22-23.

7. R.C. Majumdar, *The History and Culture of the Indian People, The Classical Age*, 1970, p.9. The discovery of 33 gold coins of Samudragupta from Mitathal (Bhiwani district) and one from Jagadhri support his hold over Haryana (H.A. Phadke).

8. D.C. Sircar, *Select Inscriptions*, p. 276; R.D. Banerji, *The Age of the Imperial Gupta*, Banaras, 1933, p. 30.

stones which he assigned to the Gupta period.¹ After the death of Skandagupta (c. A.D. 467-68) the Hunas made forays into this area. An inscribed stone seal of Toramana in Brahmi was discovered at Sugh while coins of this ruler and his successor Mihirakula were collected by Rodgers at Ambala.²

In the seventh century A. D. the district formed a part of the Srikantha *Janapada* of the Pushpabhutis of Thanesar. Rajyavaradhana and Harshavardhana marched through this region to meet the Huna menace in the north. Hiuen Tsang, the contemporary Chinese pilgrim, mentions five *samgharamas* at Sugh with about one thousand priests who discussed clearly and ably the most profound abstract questions.³ The capital of Shrugghna whose name is not mentioned, was 20 *li* (5.6 kilometres) in circuit and was deserted though its foundations were very strong. Further, the Chinese pilgrim found the disposition of the people as 'sincere and truthful'. His statement that they had faith in heretical teaching, and greatly esteemed the pursuit of learning, principally religious wisdom,⁴ only serves to show that the Buddhist faith had not struck deep roots in an area in which the Brahmanic faith continued to be supreme in the altered form of Hinduism.

Our running survey of events shows that towards the close of the seventh and first part of the eighth century A.D., the district fell a prey to the imperial ambitions of Yasovarman of Kanauj and Lalitaditya, the ruler of Kashmir.⁵ It was included in the empire of Partihara Mihira Bhoja (A.D. 833—A.D.890)⁶ which extended up to the Takkadesa in the north.⁷ In the tenth century A.D. Mahmud Ghazni and his successors several times raided the district. During the 12th century A.D. peace and order was restored in the district by the Chauhanas of Delhi who brought it under their administrative control. The Topra Asoka's Pillar contains also an eulogy of Chauhana Visaladeva or Vighraharaja IV who is credited with having subdued the whole region from the Vindhayas to the Himalayas and exterminated the

1. A. Cunningham, *Archaeological Survey of India, Reports, 1878-79*, p. 77.

2. Manmohan Kumar, *Archaeology of Ambala and Kurukshetra Districts, Haryana, 1978*, Mss, Kurukshetra University, Kurukshetra, p. 186, ff, 270.

3. Samuel Beal (Trans.), *Buddhist Records of the Western World*, p. 187.

4. *Ibid.*

5. H.A. Phadke, 'Haryana and the Gurjara-Partiharas, *Haryana Research Journal*, 1967, No. 3, p. 6.

6. This receives support from the discovery of Pratihara inscription at Sirsa and Pehowa and coins from Rohtak district (H.A. Phadke).

7. Kalhana, *Rajatarangini*, Ed. M.A. Stein, p. 206.

Mlechchas.¹ The inscription, dated A.D. 1164 gives an idea of the role which the region played in resisting the Muslim invaders. In this context the appointment of Kilhana, the maternal uncle of Prithviraja II as governor of Hansi becomes significant. Kilhana defeated the ruler of Panchapura (Pinjore) and extended Chauhana rule over that region.² The district finally passed on to the Muslim rule as a result of the decisive victory of Shihab-ud-din Ghuri over Prithviraja III in the second battle of Tarain (A.D. 1192).

It appears that during this period (i.e., from 9th to 12th century A.D.) the district retained its importance as a centre of religious pilgrimage and temple worship. Kapal Mochan, Sadhaura, Jagadhri and Pinjore were its important *tirthas* (places of pilgrimage), while the discovery of various images representing Vishnu, Uma-Maheshvara, Ganesh, Kartikeya, Surya, Gaja-Lakshmi, Tirthankaras and Buddha at several places suggests existence of beautiful temples which were probably destroyed during the Muslim invasions.³

MEDIEVAL PERIOD

After the death of Shihab-ud-din Ghuri, Qutb-ud-din Aibak inaugurated Muslim rule in north India. No reference of the region now comprising the Ambala district is available but possibly the region was included in the Sultanate at some stage. *Tahakat-i-Nasiri* refers to the victories of Sultan Nasir-ud-din Mahmud in the vicinity of Pinjore and gain of the spoils from there.⁴ Firuz Tughluq (1355—88) constructed a canal from the Yamuna to Hisar and this canal possibly provided water to the plains of the region. After Firuz's death, the region felt the full force of those intensive discords which rent the Delhi kingdom. As a result, Ambala, along with other adjacent territories, possibly went out of the control of the Tughluqs. Then followed the invasion of Timur (1398) who devastated the whole country side in the region upto Shiwalik hills (possibly including Pinjore).⁵

After the departure of Timur, confusion prevailed over a large part of north-western India. Khizr Khan, who was appointed governor of Multan, Lahore and Dipalpur annexed Samana, Sunam, Hisar and Sirhind (inclusive

1. Delhi Siwalik Pillar Inscriptions, Third Inscription, Verse 1.

2. *Indian Antiquary*, XII, p. 19.

3. Manmohan Kumar, *Archaeology of Ambala and Kurukshetra Districts, Haryana, 1978*, MSS, Kurukshetra University, Kurukshetra, p. 133; U.V. Singh, *Pinjore Sculptures*, Kurukshetra, 1977, p. 6.

4. Eliot and Dowson, *The History of India as told by its own Historians*, 1969, Vol. II, p. 353.

5. R.C. Majumdar, (Ed), *The History and Culture of the Indian People, The Delhi Sultanate*, 1967, p. 120.

HISTORY

of the area covering present Ambala district).¹ No reference to the area is available under the Sayyids. However, the case of the Lodis is different. In 1450, Bahlol Lodi, the then governor of the Punjab brought the area under his sway which lasted, under him and his successors, right until 1526, when Babur, the Mughal invader from Central Asia, wrested it.² Soon after establishing his rule in northern India, Babur brought the area under his effective control. Humayun who succeeded Babur in 1530, seems to have taken still keener interest in the district and the town of Buria is said to have been built in his times.³ Akbar's reign is full of events. The *Ain-i-Akbari* mentions that *mahals* of Ambala, Khizrabad, Sadhaura and Mustafabad (covering mostly the area lying in present Ambala district) formed part of Sirhind sirkar of the Delhi Subah. There were brick forts at Khizrabad and Sadhaura.⁴ Shah Jahan built the Rang Mahal a well built palace with massive stone arches at Buria.⁵ Fidai Khan, Aurangzeb's Master of Ordnance laid a beautiful Mughal garden at Pinjore.

After Aurangzeb's death, the political position changed and various forces rose in opposition to the empire. Banda Bahadur (1670—1713), a disciple of Guru Gobind Singh, launched a fierce attack on the Ambala area (1709-10). Accompanied by thousands of sturdy Sikh followers, Banda Bahadur who had set up his headquarters at Sehri and Khanda, the twin villages in the Rohtak district, trampled under his feet the parganas of Mustafabad, Ambala and Sadhaura.⁶ However, his success proved to be short lived. At Sadhaura, Banda gave a tough battle to the Mughals (1710) but lost the ground to their superior forces.⁷

After the defeat of Banda, Khidmat, a Mughal official governed the Ambala territory till 1739, when Nadir Shah launched a heavy attack on Ambala on February 17, 1739. The governor of Ambala had fallen back on Taraori where he was apprehended. Nadir Shah plundered the town and villages nearby it of all their grains, wealth and whatever else could serve his needs.⁸

1. R. C. Majumdar, (Ed.), *The History and Culture of the Indian People, The Delhi Sultanate*, 1967, p. 122.

2. K.C. Yadav, *Haryana Ka Itihas* (Hindi), pp. 68-69.

3. *Ambala District Gazetteer*, 1923-24, p. 144.

4. *Ayeen-Akbery or the Institutions of the Emperor Akbar* (Eng. Trans. Francis Gladwin), Vol II, 1800, pp. 283-284.

5. *Ambala District Gazetteer*, 1923-24, p. 22.

6. Khushwant Singh, *A History of the Sikhs*, Vol. 1, p. 104.

7. Banda was captured on December 17, 1713 and executed on March 15, 1716 at Delhi. For details see H.R. Gupta, *History of the Sikhs*, Vol. I, pp. 1—38.

8. W. Haig (Ed.) *The Cambridge History of India*, Vol. IV, p. 359. At Ambala Nadir left his harem and heavy baggage under a strong escort (W. Irvine, *The Later Mughals*, Vol. II, p. 334).