CHAPTER I

GENERAL

Origin of Name of District

The district is named after its headquarters town, Pithoragarh. Tradition has it that during the reign of the Chand rajas of Kumaon, one Piru, also called Prithvi Gosain, built a fort here and named it Prithvigarh which in, in course of time, got changed into Pithoragarh. According to another local legend, Pithora, a Gurkha raja, constructed a fort here and called the place Pithoragarh.

Location, Boundaries, Area and Population

Location and Boundaries– The district forms the north-eastern part of the Kumaon Division and lies between Lat. 29°27´ N. and 30°49´N. and Long. 79°50´ E. and 81°3′ E., the length from north to south, being about 151 Km. at its maximum, and the breadth from east to west, reaching its maximum at about 119 Km. It is bounded by Tibet on the north, Nepal on the east, district Almora on the south and the districts Almora and Chamoli on the west.

Area– According to the Central Statistical Organisation, the district had an area of 7,242 sq. km. in 1961 and in size occupied the tenth position in the State.

Population– According to the Census of 1961, the population of the district was 2,63,579 (females being 1,35,287).

History of District as Administrative Unit

With a view to meet the felt needs of the residents of the northern borders of the State for comprehensive development of the area, the State government created the Uttarakhand Division comprising districts Chamoli, Pithoragarh, and Uttarkashi in 1960. District Pithoragarh was constituted on February 24, 1960 with 32 *pattis*– 30 *pattis* from tahsil Pithoragarh and two pattis from tahsil Almora. In December 1968, the district was included in the Kumaon Division which was reorganized to comprise districts Naini Tal, Almora and Pithoragarh.

Subdivisions, Tahsils and Thanas

The district has been divided into four subdivisions: Dharchula, Didihat, Munsyari and Pithoragarh, each forming a single tahsil of the same name.

Triangular in shape, Dharchula, the north eastern tahsil of the district, is bounded on the north-east by the water-parting ridge which separates it from Tibet; on the south-east and east by the Kali river which separates it from Nepal; on the west by the Panch Chulhi range which divides it from tahsils Didihat and Munsyari. The tahsil consists of five *patties*. Its population was 32,566 (females, 15,753).

Tahsil Didihat is bounded, on the north by tahsil Munsyari, on the east by tahsil Dharchula and the river Kali which separates it from Nepal on the south and west by tahsil Pithoragarh and on the north-west by district Almora. It consists of nine *pattis*. Its population was 96,518 (females,

50,452).

Munsyari, the north-western tahsil of the district, is bounded by Tibet on the north, tahsil Dharchula on the east, tahsils Dharchula and Didihat on the south and districts Chamoli and Almora on the west. It consists of 3 *pattis*. Its population was 30,377 (females, 14,992).

Tahsil Pithoragarh, forming the south-western part of the district, is bounded on the north by district Almora and tahsil Didihat, on the east by the Kali river which separates it from Nepal, on the south and west by the Sarju river which divides it from district Almora. It consists of 15 pattis. Its population was 1,04,118 (females, 54,090).

Police- station—For purposes of police administration there are four police-station in the district, one at each tahsil headquarters. Each of the 32 pattis of the district is a revenue police circle.

GEOLOGY

The district lies in the Himalayas which are the youngest mountains in the world and the land mass now covered by them was occupied by the great geosynclinal Tethys sea during the Mesozoic period. The probable date of commencement of the elevation of the Himalayas is about the close of the Mesozoic period.

According to geological formations of the district, it may be divided into four broad belts, viz., (1) the innermost Siwalik hill ranges, (2) the lesser and middle Himalayas, (3) the inner Himalayas and (4) the thin belt bordering the Tibetan Himalayas, roughly tending east-south-east.

The belt of the innermost hill ranges of the Siwalik group lies in the southern part of the district. In the rock formations here sandstones alternate with clayey shales. The sandstones are dirty, friable and micaceous and are, therefore, unsuitable for the building, ballast and industry.

The second belt, comprising the ranges of the lesser and middle Himalayas, extend north of the Siwalik group to Dharchula. It contains sedimentary and low to medium grade metamorphic rocks such as limestone, slate, quartzite, phyllite and mica-garnet schist. Mineralization of copper, magnesite, soap-stone, etc., is known to occur in this belt.

The third belt, containing higher ranges of the inner Himalayas, is wholly composed of crystalline metamorphic rocks such as mica and garnet schists, kyanite and sillimanite schists, gneisses, granulites and quartzites. This belt is very little known geologically. The belt extends from near Dharchula to Garbyang.

The fourth belt, bordering the Tibetan Himalayas has an average width of about 7 km. It contains marine sedimentary rocks such as quartzites, fossiliferous limestones and shale.

Minerals

A number of minerals are found in the district, and brief notes about them are given in the following paragraphs.

Copper—The region around the town of Pithoragarh has been one of the important centres of copper mining in the past. The remnants of old copper mines which collapsed long ago are found at Agar Barabisi and south of Askot. Such a mine is also reported to have existed below Pithoragarh town where there in now a natural spring, of which the water has a metallic taste.

These mines were abandoned due to the poor quality of ore and difficult mining conditions. Copper ore is found to occur as disseminations in crystalline dolomites and as segregations in quartz veins traversing the former. Chalcopyrite, tetrahydrite, cuprite and malachite are said to have been found in the mine. South of village Ascot malachite is commonly found staining the country rock, which is also traversed by quartz veins bearing galena, pyrite, arsenopyrite and chalcopyrite, Chalcopyrite specks and clusters up to 4 cm. in length have been found at Bora-Agar in a band of crystalline dolomite extending for about 1,209 m. Associated minerals are cuprite, tetrahydrite and malachite and azurite, disseminated in quartz stringers and also in crystalline dolomite, occurs near Dewal Thal.

Magnesite—Several scattered deposits of magnesite are found in the area around Pithoragarh. They are associated with the dolomite limestone. Very little work has been done on these deposits. Extensive deposits of the mineral occur at several scattered localities in the neighborhood of Dewal Thal. Some of the more promising ones being located at Dewal Thal, Chandag, Phadyari and Satsilang. Other promising deposits occur at Osail, Bevalthal, Harali, Pathrauli, Ramkot, Bunga Chhina and Masum Bheo. Between Tong and Dhurai in Rani Agar occur two promising zones of crystalline magnesite which extend for almost a kilometre. The deposits in the northern zone are about 23 m. and in the southern about 60m. in thickness.

Soapstone—Several small deposits of soapstone occur in association with magnesite at Dewal Thal and Chandag.

Arsenic—Orpiment deposits exist near Munsyari. Both orpiment and realgar are reported to be available in scattered fragments on the moraines of the Shunkalpa glacier. The ore had probably come down from the hill face immediately above.

Sulphur—This mineral is found in the bed of the Ramganga (eastern) and in tahsil Munsyari.

Kyanite—At Girgaon (south of Malpa) there is a thin layer of blue scaly kyanite, the rocks also bearing sericite quartzite.

Graphite—Graphitoid pigmentation in schistose rocks is found near villages Sobala and Dar in the Dhauli valley and north of Sirdang in the Kali valley.

Slate—Slate quarries exist throughout the district and it is utilized locally for building purposes.

Limestone—Though vast reserves of limestone exist in the district, they are dolomite and appear to be fit only for ballast.

Climate

The elevation of the district ranges from 500 m. above sea level in the valleys in the south to over 7000 m. in the snow-bound Himalayas in the north and north-west. The climate, therefore, largely depends on altitude and varies according to aspect and elevation. Although tropical beat may be experienced in the southern valleys during the summer, the winters are severe. As most of the district is situated on the southern slopes of the Himalayas, monsoon currents penetrate through the deep valleys and rainfall is at the maximum in the monsoon season (June to September), particularly in the southern half of the district. The northern half of

the district also gets considerable rain during the winter season which lasts from mid-November to March.

Rainfall—Records of rainfall in the district are available for eight rain recording stations which, however, are so located that the records are more properly representative of rainfall in the river valleys. The rainfall generally increases from the south towards the north and place. Most of it occurs during the monsoon period, being between 75 per cent and 85 per cent of the annual precipitation in the south and between 50 per cent and 70 per cent in the extreme north and north-east. July and August are the rainiest months. In September depressions from the Bay of Bengal occasionally affect the weather and, in association with them, heavy rain may occur causing floods. In the monsoon season there are a few occasions when there are spurts of heavy rain in the hills causing floods in the rivers. The rainfall decreases rapidly after September and is the lowest in November. During winter, from December to March, considerable precipitation occurs in association with the passage of western disturbances across the region, particularly in the northern parts where it is considerably higher than in the rest of the district, being about 20 per cent of the annual total.

During the fairly long period between 1901 and 1960, for which rainfall date are available for five older stations, the number of years when less than 80 per cent of the annual normal precipitation occurred was 13 at Askot, 12 at Pithoragarh, 10 at Chaukori, 9 at Berinag and 2 at Dharchula. The number of spells of two consecutive years when such low precipitation was recorded was on each at Pithoragarh and Berinag and two at chaukori; the number of spells of three such consecutive years was two at Askot, which also recorded along spell of low precipitation lasting five years from 1928 to 1932. The heaviest rainfall in 24 hours recorded was 274.3 mm. at chaukori on June 22, 1916.

Temperature—There is no meteorological observatory in the district. The following account of the climate is based mainly on the records of the observations in the neighboring districts where similar meteorological conditions prevail. Variations in temperature are considerable from place to place and depend upon elevation as well as aspect. As the insolation is intense at high altitudes, in summer temperatures are considerably higher in the open than in the shade. Pools of cold stagnant air in the valleys cause the diurnal range of temperature to be considerable. January is the coldest month with a mean maximum temperature of 10°C. at heights of 2,000 m. above sea-level, the mean minimum temperature being at the freezing point (0° G.). Cold waves in the wake of western disturbances often make winter conditions rigorous. With the onset of the monsoon towards the end of June, day temperatures fall by about 3° to 5°C. and with its withdrawal towards the third or fourth week of September, day and night temperatures begin to decrease, slowly in the beginning but more rapidly after October till January, which is the coldest month. Temperatures are much lower at higher altitudes towards the north. in association with western disturbances, precipitation at higher altitudes occurs mostly in the form of snow which accumulates considerably in the valleys.

After January, both day and night temperatures begin to rise, rapidly from March to May or June, the last two being the warmest months. The mean daily maximum temperature is about 25°C. at stations 2,000 m. above sea-level, 15° to 18°C. at 3,000m. above sea-level, and still lower at higher elevations. With the incursion of the monsoon current, temperatures fall slightly by about 3° to 5°C.

Humidity—The humidity is highest during the monsoon months and particularly so during the rainiest months of July and August. During the winter months, it increases towards the afternoon at high altitudes.

Cloudiness—Skies are heavily clouded during the monsoon months and for short spells when the region is affected by western disturbances. During the rest of the year, the skies are generally clear to lightly clouded.

Winds—Owing to the nature of the terrain, local effects are pronounced and when the general prevailing winds are not too strong to mask these effects, there is a tendency for diurnal reversal of winds which blow up the slopes during the day (anabatic flow) and down the slopes at night (katabatic flow). Katabatic wind can blow with considerable force.

FLORA

The northern part of the district, comprising the larger portions of tahsils Munsyari and Dharchula, where there are high mountains and ridges, is rocky, bland and covered with perpetual snow. The forests are confined to the river valleys and the southern parts of the district. In 1968, an area of about 2,80,403 hectares or 38.71 per cent of the total area of the district was covered with forests. of the total forest area tahsil Munsyari contained 1,98,493 hectares, tahsil Didihat 58,832 hectares, tahsil Dharchula 11,555 hectares and tahsil Pithoragarh 11,523 hectares.

Taking into consideration the differences in the altitudes and the climatic conditions which obtain in the district, its flora may be divided into four main divisions—the sal forest, chir forests, oak forests and the coniferous forests. The willow and older trees are, however, common everywhere in damp situations. The deodars are introduced plants in the district but have become wild. They are found in the southern part of the district around the temples where they had been planted for many generations, their magnificent groves being seen around Gangolihat in tahsil Pithoragarh.

Sal Forests—These forests occur in the southern part of the district and the chief tree, sal, is found up to a height of about 1,220 m. and as far as north as patti Malla Askot. On the hills the sal does not attain the height to which it grows in the plains. Other associated trees which also grow in these forests are the haldu, sain, kharik, and tun kharik, the last two being comparatively less common. The sal logs are chiefly used for building purposes. The bhyunl, an extremely useful tree, grows in the valleys and lower hilly slopes and is carefully protected, for its leaves afford excellent fodder for cattle, and the fibres of its young shoots are twisted into ropes. Up to heights of about 900 m., trees common in the plains, viz., the mango, pipal, banyan and, sissoo are very frequently in evidence.

Chir Forests—The chir is the principal component of forests up to altitudes of about 1,800 m., growing between 500m., when not unduly exposed to the sun, and 2,200 m. on a south aspect. Chir trees are usually found alone, for they appear to have the power of driving away all other vegetation from the tract where they are found Chir is the staple building timber in the hills, while vast quantities of it are exported in the shape of sleepers. Torches are cut out of the living wood. Resin is also extracted from the tree. Its seeds are eaten.

Oak Forests—The principal varieties of oak found in the district are the banj, tilonj and the kharsu, each occupying a more or less distinct altitudinal zone.

Banj begins to grow at heights of 1,800 m. and 2,450 m. The tree usually attains no great height. Its wood, being hard and gnarled, is used for agricultural implements and fuel. It has the capacity to establish itself on the highly unfavorable south aspect. Banj forests are usually dense

on the north aspects but open on the south aspects. The other trees found in these forests are the rhododendron and ringal which occurs in clumps rising to about 4 m. to 6 m. and containing as many as one hundred shoots.

Between the altitudes of 2,150m. and 2,450m. tilonj, is the chief species of the oak forest and between the altitudes of 2,450 m. and 3,550 m. kharsu is the dominant tree. The main associated trees of the tilonj and kharsu forests are the horse-chestnut and the syeamore. The tilonj and kharsu, the hardier oaks, resemble the banj and are used for the same purpose, but they are straighter and less knotted.

Coniferous Forests—Between the altitudes of 3,250 m. and 4,00 m. the dominant species are the conifers. The chief species is the ragha (Himalayan silver fir) which mainly occurs between the heights of 3,250 m. above the sea-level.

It is a tall tree which resembles the cypress at first glance, its branches being short and close. It attains a height of about 45 m. and a girth of about 4 m. The wood is considered to be equal to that of the chir but owing to its remote situation is seldom used except for roofing shingles. The blue pine (chil), the yew (thaner) and the cypress (surain) are also found in this region. The cypress sometimes attains an enormous size. The wood is hard, tough and durable and too heavy for floatation by itself. With these forests is found the variegated bush rhododendron with flowers of all colours, pink, purple, blue and pure white. The birch grows up to heights of about 4,000m. and its stems give the famous bhurjapatra of Bhoj-patra which in earlier times, was used as writing material before the invention of paper. Many old manuscripts written on Bhoj-patra are still available in the country.

Fauna

Animal—The wild animals of the district have greatly declined in number and variety during the past few decades.

Of the animals in the district, the sambur which is the most widely distributed of all the deer tribe is found up to an altitude of about 3,050 m. above sea-level. The sambur of the hills, where it is called the jarau, is a stouter and more massive beast than the sambur of the plains and has very heavy horns which are shed during May. The rutting season for the animal is October-November. The kakar or barking deer is also met with up to the same height. The musk-deer (kastura) is found in the upper ranges from an altitude of 2,400 m. above sea level to above the limit of the forest but it has now become almost extinct owing to reckless shooting for its valuable perfume-bearing pod. It is about 50 cm. in height and has a brownish grey colour with harsh and brittle hair. It is generally solitary, very active and sure-footed and prefers rocky, precipitous ground. The nilgai is occasionally found at the foot of the hills and, the four-horned antelope, in the lower sal-clothed hills. The goral or Himalayan chamois is found at heights up to 3,350 m. but its usual habitat is between altitudes of 900 m. and 2,750 m. Both sexes have horns, those of the male being about 15 cm. and of the female about 10 cm. in length. They are generally found in herds of three to four animals but the largest male is usually solitary. The affect moderately steep grassy slopes not too thickly covered with pine. The goral is very tenacious of life and will often carry away a lot of load. The thar is found in the most precipitous parts of the upper ranges between 2,100 m. and 3,700 m. above sea-level, according to season. Both shorter. The male thar is about a metre in height and carries horns about 40 cm. long. The jarau, which also belongs to the goral family, is nearly as large as the thar. It inhabits the precipitous rocks clothed with dense forest, and is a very shy, strange and uncouth beast. Its horns are 20 cm. to 25 cm. in length. The bharal or wild blue sheep is rare in the district. It frequents the grassy slopes between the heights of 3,000 m. and 5,000 m.

The tiger found here is different from that found in the plains, being stouter in build and with longer and more furry hair and shorter and thicker tail. The bagh, baghera or panther is common throughout the district. It lives upon cattle, goats and sheep and is bold and blood-thirsty beast. The snow leopard is rare in the tract south of the snowy range but there are generally one or two available on all hills where the bharal is found. The Himalayan black bear is common throughout the district and is generally seen during the rains. The rare red bear is found in the northern part of the district. It feeds on roots, weeds, grasses and even insects, but will also eat the flesh of animals killed by itself. It has also been known to feed on carreon. Its scent is keen but sight and hearing are dull. It hibernates from December to March and is a timid, unaggressive animal. The jackal is found up to a height of 2,150 m. and the wild pig up to that of 3,050 m. Monkeys and langurs are found throughout the district.

Birds—The district is very rich in birds. Birds of prey like eagles hawks, falcons and vultures, are very common. Among game-birds the lungi pheasant is found at an altitude of about 3,700 m. and the monal pheasant at elevations between 2,400 m. and 3,700 m. The kokla or pokra is seen between heights of 1,800 m. and 3,700 and the chir pheasant is found between altitudes of 1,500 m. and 2,400 m. above sea-level. The kalij a common pheasant, and black partridge frequent the thick forests up to a height of about 2,400 m. The chakor is a very common bird among partridges. The snow partridges are rare. The Himalayan snow cock is found on or near the snowline. Among pigeons, the wood-pigeons are also seen in the higher ranges. Duck and teal occasionally rest on the rivers.

Reptiles—There are 34 species of snakes which are found in the district, out of which 26 varieties are non-poisonous and 8 poisonous. The cobra is found up to an elevation of 1,800 m. beyond which it is rare. The krait is very common in the low hills and grows to a length of about a metre. Its colour above is deep, lustrous, blue-black, uniform, or streaked and reticulated with white; below, it is white. The wall's krait has a glistening black colour on the back marked with milky white cross lines, formed of smallish oval or round spots. Below it is white, mottled with slate towards the tail. It resembles the common krait in appearance but is larger in size. The king cobra grows up to 2.5 m. in length. Callaphis Mac Clellandi is rarely seen here. The nigriventer, which occurs in the sub-tropical belt is venomous but not fatal for the human species. Russell's viper is common up to a height of about 1,800 m. and the Ancistrodon himalayanus is the only hill snake which is found above that of 2,500 m.

Among the non-venomous snakes the python is most notable. It grows to about 10 m., but specimens of over 7 m. are rare. Its rarity in the upper hills has invested the few specimens seen with almost supernatural terror. It is called the charao in the hills and superstition attributes to it an enormous size, with a flowing mane of red hair, and the habit of using a large pine tree as a walking stick when descending from the mountains. The dhaman which grows to about 2 m. in length is common in the district.

The blood-sucker lizard in spite of its name is perfectly harmless and grows to lengths of between 35 cm. and 40 cm. The leech is particularly active during the rains and prefers oak forests. After a smart shower it appears in myriads, and any barefooted wayfarer is soon made uncomfortably aware of its presence. The bite of the mora, a small stinging fly, also causes small painful sores and intense irritation to travelers.

Fish—Fish abound in all streams of the district. Among the larger species the mahaseer and the kalabans are very common. The gunch or fresh-water shark inhabits the deeper pools of the Sarju. The trout is rare, but the chilwa swarms wherever there is running water. Among the other species found in the district are the asela, rohu and garra. In the latter part of the hot

weather, the fish run up the stream to deposit the ova and return in the rainy season, when they are generally caught.

Game-laws—The game-laws obtaining in the district are governed by the Wild Birds and Animals Protection Act (Act VIII of 1912), as amended by the Wild Birds and Animals Protection (Uttar Pradesh Amendment) Act, 1934 (Act XIII of 1934), and sub-section (1) (i) of section 26 of the Indian Forest Act (Act XVI of 1927), as amended by the Indian Forest (Uttar Pradesh Amendment) Act, 1965.