Chapter 3

GEOGRAPHIC SET-UP

3.1 Extent & location

The present area comprises about 200 km² of country, U. and S.U. of the vil. Pisangan (lat. 26°24' N., long. 74°25' E.) within the S.U. Ajmer district, and lies between lat. 26°15' and 26°27' N. and long. 74°15' and 74°23' E., being a part of the area covered by Survey of India topographic map index no. 497, Carte Internationale Du Monde Shoot no. N.0-43, (fig. 1, p. 2).

3.2 Accessibility

The village Pisangan (lat. 26°24' N., long. 74°25' E.) is 20 km. in a northwesterly direction along a metalled road from the vil. Ramcaliwas (lat. 26°17' N., long. 74°31' E.), which is on the National Highway no. 8 connecting Delhi to Bombay via Ajmer, as well as on the metre gauge main line of the (Western) Indian Railways connecting Delhi and Agra to Ahmedabad via Ajmer, (fig. 1, p. 2).

The rest of the area is accessible only on foot (and only partially by jeep, which however was not available to the author) along cart and foot tracks. The southern part of the area around the vil. Ratangarh (lat. 26°17' N., long. 74°16' E.), Jhalawad (lat. 26°16' N., long 74°15' E.) and Rangarh (lat. 26°16' N., long. 74°17' E.) is nearer to the vil. Res (lat. 26°19' N., long. 74°11' E.) and Sabra (lat. 26°14' N., long. 74°15' E.) which are respectively 50 km. and 20 km. by an unmetalled but negotiable road from the town.
3: Geographic set-up

Beawar (lat. 26°07' N., long. 74°19' E.) on the National Highway and Railway, (fig. 1, p. 2).

Ajmer city (lat. 26°28' N., long. 74°38' E.), vil. Mangaliram (lat. 26°17' N., long. 74°31' E.) and Beawar town (lat. 26°07' N., long. 74°19' E.) are respectively 379, 404 and 431 km. from Delhi by the shortest railway route and 399, 425 and 452 km. along the highway.

3.3 Climate, physiography, drainage, soil, vegetation and rock exposures

The present climate of the area is sub-tropical (the mean temperature of the coldest month is about 15° Celsius), semi-arid (the average annual rainfall being about 40 cm.). The range of daily temperature particularly in summer, as well as the difference of mean temperatures in summer and winter is wide as in deserts. The annual rainfall is also extremely variable, monsoon failures being the rule and particularly heavy monsoon the exception.

The area being part of the orocional relict of the Aravalli range exhibits a very nature topography controlled by lithology and structure. It has a rugged topography with innumerable large and small hills and ridges of bare rock rising upto a maximum of 200 m. above the general level of about 400 m. in the plains.

The area is drained by numerous first order streams which concentrate into the rivers Sabarmati, Lilri and Luni, none of which is perennial. The rivers Sabarmati and Lilri are tributaries to the river Luni which during floods flow
into the Arabian Sea through the Rann of Kutch. Most of the streams within the area have been dammed to store water for cultivation.

The soil cover in this area is thin and restricted to the valleys and plains in between the hills and ridges. Natural vegetation is sparse, being restricted to scrub, thorny-bushes and cactus. The river beds and the plains are usually cultivated.

The northern part of the area lying to the north of lat. 26°23', i.e., between the vil. Govindgarh (lat. 26°27' N., long. 74°23' E.) and Pagara (lat. 26°22'7' N., long. 74°20'5' E.) is mainly flat country at an altitude of over 400 m., filled with sandy soil (rock fragments and sand dominant over clay) and blown sands. Rock outcrops here are scrappy and fragmental. The politic and calcsilicate notacodiments and the marbles do not form any relief. The psammitic notacodiments form discontinuous low strike ridges rising to a maximum height of 20 m. above the surrounding level country of calcsilicate notacodiments. The notaultransfites form small hillocks, the largest (426 m. high at lat. 26°25'6' N., long. 74°20'9' E.) standing out by nearly 30 m. above the surrounding level country.

The central part of the area between the vil. Pagara (lat. 26°22'7' N., long. 74°20'3' E.) and Dhuaria (lat. 26°17'2' N., long. 74°19'7' E.) is mainly hummocky country of notabacites (hornblende schists and amphibolites) forming the hills: 466 m. (lat. 26°22'3' N., long. 74°19'4' E.), 491 m. (lat. 26°20'7' N., long. 74°18'8' E.), 600 m. (lat. 26°18'1' N., long. 74°18'6' E.), 430 m. (lat. 26°17'8' N., long. 74°17'4' E.), &c. within which
The politic notasodiments occupy along the valley of Dora Hala (stream) between the vil. Kosarpura (lat. 26°20'9' N., long. 74°19'2' E.) and Mohoria (lat. 26°20'6' N., long. 74°20'5' E.), and N.E. of the vil. Bakihtavarpura (lat. 26°19'3' N., long. 74°20'0' E.). Loro rock exposures are abundant, continuous and unweathered, and soil cover absent except in the stream valleys.

Further south, the area lying to the S. of lat. 26°17' and the vil. Ratangarh (lat. 26°17'0' N., long. 74°15'9' E.), Karnoo (lat. 26°17'1' N., long. 74°17'2' E.), Sheopura (lat. 26°16'6' N., long. 74°18'7' E.) and Bhuaria (lat. 26°17'2' N., long. 74°19'7' E.) is undulatory with details of topography more varied. This region is intricately dissected by a large number of first order streams, which concentrate in a dendritic pattern into the Dora Hala (stream) running E. to N. into the river Lilri. The total relief of the area is about 30 m., the altitude falling from about 415 m. in the E. to about 300 m. near the river Lilri in the W. Several of the large number of interstream areas are occupied by small ridges with trends varying but always parallel to the most prominent foliation of its rocks (pp. 76-78).

The main ridge formers are the psammite notasodiments of the marbles, metasbectes and granites. The barren low lands are usually occupied by politic notasodiments while the plains occupied by the calcisilicate notasodiments normally has a better soil cover and are extensively cultivated.
Fig. 5. Panoramic view of flat country of metasediments N. of vil. Pasara.

Fig. 6. Hummocky country of metabasites N. of vil. Kesarpura.

Fig. 7. Flat country of pelites in the valley of Dora Nala E. of vil Kesarpura.