

SEASONAL MOVEMENTS IN THE SAHYADRIAN RAINSHADOW OF TWO PASTORAL GROUPS : THE DHANGARS AND THE BANJARAS

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ABSTRACT : A quarter of the population in the Sahyadrian rainshadow zone of the Western Ghats is spatially mobile and rely for atleast 7-8 months in the year on a migratory pattern of livelihood. The present study traces the changing radii of seasonal movement cycles of two pastoral groups, the 'Dhangars' and the 'Banjaras' in the Nandgaon tehsil of Nasik district in Maharashtra. Using the spatio temporal perspective, the manner in which the two groups have adapted and re-adjusted their subsistence strategies in the face of acute fodder shortage has been examined.

INTRODUCTION

In the present study we put forth very briefly the preliminary results (of the larger part) of our field research pertaining to seasonal movements of two spatially mobile pastoral groups : the Dhangars and the Banjaras. Like most semi-nomadic people, both these groups rely for a major part of their subsistence on a migratory pattern of livelihood. The Dhangars are shepherds, who have retained their traditional calling of tending sheep, while the Banjaras, hailing from Rajasthan, are an erstwhile itinerant group, travelling all over the country transporting goods on pack bulls. Subsequent to the extension of the British rule, and with the advent of rail and road transport after the 1850's, the Banjaras' original occupation of *ladeni*, or long distance haulage, virtually collapsed. They were now compelled to settle down permanently and switch over to a seasonal form of labour migration. Earlier, the Banjaras were included in the list of criminal tribes.

AREA OF ENQUIRY

Although a considerable area in the Sahyadrian rainshadow is affected by seasonal fluctuations in the size and composition of human and animal population, little empirical data is available on these aspects, especially at the micro-level. This becomes a serious limitation for government-sponsored development planning agencies

and is bound to seriously affect the formulation of realistic people-oriented programs for environmental restoration/management, especially of the over grazed forests and pastures.

STUDY AREA

First hand data from field work for twelve sample villages from Nandgaon tehsil in the rainshadow zone was the basis for drawing inferences. Here, at least 20-25 per cent of the population is involved in seasonal movement, because aridity in the area precludes year-round grazing. Nandgaon tehsil is located in the Girna basin, in Nasik district of Western Maharashtra. With an area of 1091.9 sq. km., Nandgaon tehsil has a total population of 1,64,645, spread over 86 villages. The area is mainly Savannah country, covered by the Satmala hills, the off-shoots of the Sahyadris. Elevations range from 500 to 700 meters, and the average annual rainfall varies between 500-600 mm. The vegetation considered in this discussion as a source of grazing for livestock is deciduous scrub forest, largely depleted due to over-grazing.

For micro-level analysis, Nandgaon, which is most affected by seasonal migration is considered a proper choice. The Dhangars and Banjaras, both semi-nomadic groups constitute over 20 per cent of the total population. Besides this, a combination

of unique environmental and historical factors have been instrumental in the settling of pastoral people in this area in such large numbers.

DHANGAR 'WADAS' AND BANJARA 'TANDAS' : A HISTORICAL PERSPECTIVE

There are 30 Banjara settlements called *Tandas* in 22 villages located mostly in the southern parts of the tehsil. Rainfall here being marginally higher (600 mm.) than in the drier northern slopes, this area with taller grasses is more suited to grazing larger animals, mostly cattle, which the Banjaras rear. The Banjaras settled in the Nandgaon region after 1850, on giving up *Ladeni*. They were familiar with this region during their early long distance migration, as they used to frequently travel over the old trade route to South India which passed through Kasara pass near Nandgaon, connecting Surat, Manmad and Paithan. An added incentive to settlement in the area, besides the vast areas of unoccupied pastures for grazing, was the government's offer of providing land on *Nawade* or 99 Years lease, to sedentarise these unsettled communities.

There is no direct reference to the Dhangars' migration into the area from outside, except perhaps that before they settled in the region some 300-400 years ago, the Dhangars were of purely nomadic habit (Fig. 1). They used to roam extensively over the Malwa, Chattisgarh and Deccan Plateaux, remaining at a place as long as pasture for their flocks was available. A number of Dhangars interviewed mentioned that they have migrated to the area from the drier parts of Ahmednagar, Satara and Pune districts in Maharashtra in search of pasture and settled here permanently. In the local caste hierarchy they occupy a position lower than the *Maratha*, the agriculturist caste, and the *Kunbis*, who were formerly a class of agricultural labourers.

THE CHANGING FORM OF PASTORALISM

The changes in the organization of pastoral people have not ended their dependence on traditional seasonal migration. Also the pastoral community's economy has not remained entirely static. The most significant change has been a total shift from pure nomadism to semi-nomadism, and finally to pastoralism with the pastorilists becoming fully sedentary. This is not to suggest that all pastoralists in this area have become sedentary, but in the last 100 years, the government has made conscious efforts to encourage the sedentarization of such people. A large number of semi-nomadic people retreated into those areas where crop cultivation was impossible without irrigation. This is best illustrated by the area under study, where the optimal land use is pastoral. With the introduction of drought resistant cereal varieties in their domain, some pastoral people in our area have become settled farmers. Much of this territory was earlier under excellent pastures. Grigg (1988), has observed that wherever pastoralism has survived after a long history of agricultural expansion, it is because in the arid and semi-arid areas it is the most optimum method of exploitation of land. Conversion to ranching has proved difficult, hence it may be wise to leave these people for the moment to their traditional migratory pattern of livelihood rather than enforce sedentarization.

CHANGING ASPECTS OF SEASONAL MIGRATION

In our area both the pastoral groups, though semi-nomadic, are permanently settled. They own some land which provides enough food for 3 to 4 months. For the rest of the year, the Dhangars, with the depletion of forests and village pastures, depend largely on the irrigated farmers for subsistence during the period of their seasonal migration. One

wonders if this could be described as living in a symbiotic relationship with the cultivators? This is perhaps best illustrated by the Dhangars of Nandgaon who pasture their sheep on the arable stubble of the irrigated cash crop like chilli, banana, cotton etc. From an earlier predatory relationship in which much of the forest and other natural grazing lands were devastated, the present shift could be a welcome change, in the face of diminishing natural pastures.

TYPE OF SEASONAL MIGRATION

Seasonal movements of the Dhangars and Banjaras in the area are distinct, as they employ different strategies for deriving subsistence. Either way, it is clear that the labour migration of the Banjaras and the seasonal movement of the Dhangars with their animals after the home pastures dry up, cannot be termed transhumance. There is great difference between vertical and horizontal seasonal migration of the Bakkarwals and Gaddis of the Himalayas and the Dhangars. In the former, the journey envisages a seasonal movement of livestock from winter grazing to summer pastures, i.e. to regions of different climates where the effect of altitude is crucial and dictates the climate and vegetation. In the latter case, which is seen in our area, seasonal movement commences after fodder in the area is exhausted. The Dhangars particularly, rely solely upon natural vegetation to provide fodder for their sheep. They neither sow pastures nor store forage, hence they are virtually forced to migrate after Diwali, somewhere around November–December, until the arrival of rains in early June. The feedstock at home lasts barely for three months after the rains cease in September.

SEASONAL MOVEMENT CYCLES OF THE DHANGARS

The Dhangars of Nandgaon keep to prescribed territories and it is only in years

of drought, like in the early fifties, that the course of migration gets drastically changed. Earlier, they used to graze their sheep in the reserve forests, or they would bid at auctions held by the Panchayats for grazing rights to village commons. In recent times, with the depletion of pastures, the Dhangars have developed a kind of reciprocal relationship with the farmers in irrigated areas. Each migratory unit of Dhangars in the area is virtually following a more or less similar route for the last 10 to 15 years, except that they stop at different places enroute to graze from one year to another. In general, the pastoral cycles of the Dhangars are well-ordered, and confined to their own territories in the short run. In the long run however, we observed that many of the Dhangar groups have displayed pastoral drift, i.e. long term, long distance migration from one area to another.

This is observed in the case of some Dhangar families who have migrated due to fodder crisis from the drier parts of Ahmednagar, Satara and Pune districts and settled in Nandgaon.

THE CHANGING RADIUS OF THE DHANGARS' PASTORAL CYCLE

After giving up true nomadism, when they eventually settled permanently, the Dhangars experienced no difficulty in grazing their flocks within a radius of 5–7 km. from their homes till about the early part of the 20th Century. So the early pattern was more in the nature of daily commuting to the grazing runs nearby, and returning home each evening. As home pastures depleted, the Dhangars had to undertake seasonal migration. Initially this was restricted to within the limits of Nandgaon tehsil. After the 1950s, a drastic change in the seasonal migratory pattern took place, following 2–3 years of severe drought in the area. To face the crises created by acute fodder shortage, the Dhangars were forced to reduce the size of their flocks

from an earlier 5000–7000 sheep to a mere 1000–1500. At the same time the radius of seasonal migration was considerably enlarged (Fig. 1). They now migrated to the adjoining districts of Jalgaon and Nasik. The problem of finding fodder was further aggravated with the shrinking of pasture lands : due to extension of cultivation, ban on grazing in the reserve forest areas and the acquisition of common grazing lands and unoccupied lands by the village panchayats. Overall strict measures to prevent illicit and free grazing during seasonal migration imposed great hardship on the Dhangars who had little option but to reduce the size of their flocks. A significant change in the pattern of seasonal migration in the area came about in the mid sixties with the completion of the Girna dam and the Jamda right bank canal. Earlier, seasonal migration commenced as soon as local pastures were exhausted and was geared entirely to the Dhangar's own need for fodder. Their migration route kept close to the reserve forests and other unoccupied scrub and waste lands. With the coming of irrigation, the cropping pattern changed from single-crop subsistence farming to cash crop farming, where several

crops could be grown in a year. The post-irrigation phase saw a switch over to a cycle geared to supplying the farmer with sheep manure which he increasingly used to raise the productivity of his fields under cash crops. For this purpose the Dhangars were now required to pen their flocks at night in the farmer's fields. Reciprocally, they were assured of protection and shelter for their sheep and received for every night, cash payment of Rs. 10/- per 20 sheep and 15 kgs. of grain. They could also graze their sheep on the stubble left over in the fields after the harvest of crops like chillies, banana, cotton and onion. For additional sources of fodder they depend on the village pastures, whose grazing rights they purchase at public auctions held yearly by the village panchayats. Due to acute shortage of fodder, the Dhangars now face stiff opposition at auctions from other migratory herds people like the Kathiawadis, who, since the last few years, come annually to the area with hordes of cattle. Depending on the size of the pasture and quality of fodder, prices for grazing lands vary from a minimum of Rs. 2,000/- to a maximum of Rs. 25,000/- per season. (Table 1)

TABLE 1

Animal Wealth, Livestock and Landholding of the Dhangars

Sr. No.	Village	Total Dhangar Population	No. of Families			Livestock						Total Animal Population
			Total	Land-ed	Land-less	Sheep	Goats	Bulls	Cows	Buffa-loes	Hor-ses	
1	Kondar	550	138	78	60	1200	50	200	30	8	80	1560
2	Bhardi	450	59	40	17	500	40	67	15	7	30	649
3	Darhel	1380	47	16	31	700	18	26	16	8	15	883
4	Parekarwadi	165	21	12	9	350	50	16	10	2	12	440
5	Hakewadi	325	32	21	11	600	35	38	24	10	23	730
6	Boyegaon	450	88	50	38	1500	25	76	28	16	78	1723

Since the last 15-20 years, the seasonal movement cycle is adjusted to synchronize with the harvest of various crops, governed as it is, more by the need of the farmer for manure, rather than the Dhangars' requirement of fodder. In recent times, the mean estimated circular route travelled by the Dhangars of Nandgaon, would be around 250 km. Six cycles were traced for six Dhangar villages in the area. Four cycles go eastwards, to the Chalisgaon-Bhadgaon area up the Girna dam and into the Tittur river basin, while two branch out westwards upto Dindori tehsil in Nasik district (Fig. 2).

**THE DHANGAR WADA :
ITS COMPOSITION AND
FUNCTIONAL ORGANIZATION**

For the purpose of seasonal migration, about 10-15 Dhangar families under the leadership of a 'Mirdha' or group leader,

form a viable unit called 'wada'. It is the duty of the *Mirdha* to chalk out the route for the seasonal migration, make prior arrangements for the halts enroute, fix up with the farmers for night halts on their farms, and make bids grazing rights at village panchayat auctions. He is really the overseer of the *wada*. Earlier the office of *Mirdha* developed by heritage, but now he is appointed to the post by election. He enjoys certain privileges and receives a commission for his services. He is assisted by a couple of young males called 'Mendkas', whose function is to watch over the sheep as they graze. The *Mendkas*, in turn, are assisted by young boys (10-14 years), who act as 'Pasarkyas', or errand boys collecting wood, fetching water and generally assisting in other chores (See Table 2).

TABLE 2

Composition of Dhangar Wadas (Human and Animal Population Participating in Seasonal Movement)

Sr. No.	Village	Composition of Dhangar Families					Animals in Migration					Round Distance in km	Duration
		Total Families	Male	Female	Children	Total Persons	Sheep	Goats	Horses	Dog	Carts		
1	Kondhar	15	30	15	17	62	1200	50	7	10	1	250 km	7 Months
2	Bhardi	12	17	11	13	41	1500	40	2	7	1	280 km	7 Months
3	Darhel	9	15	17	14	36	1000	18	10	8	1	240 km	6 Months
4	Parekarwadi	18	25	18	20	63	1500	50	16	12	-	250 km	7 Months
5	Hakewadi	15	28	12	15	55	1000	35	12	10	1	235 km	7 Months
6	Boyegaon	19	30	16	14	64	1600	25	13	11	1	250 km	7 Months

THE ECONOMY OF SHEEP REARING

The income from sheep rearing varies between Rs. 3,000/- Rs. 3,500/- per year, per 100 sheep. The Dhangars, for accounting purposes, use a measure called 'Khandi', denoting 20 sheep or 'Khand' for 100.

BREAK-UP OF INCOME FROM 100 SHEEP FOR VARIOUS PRODUCTS

Sr. No.	Item	Amount (Rs.)
1	Sheep on hoof	4,000
2	Manure	1,500
3	Wool and Skin	500
	Total	6,000

For penning a *Khandi* (20 sheep) for the night, a Dhangar receives Rs. 10/- in cash, 15 kgs. of grain and breakfast. In lieu of breakfast, he is sometimes paid Rs. 2-3 in cash (*Khusali*), which amounts to a tip. After deducting all expenses, a Dhangar with 100 sheep takes home at the end of the cycle, Rs. 3,000-3,500 in cash and 2-3 quintals of grain. About 40% of the sheep in a Wada belong to absentee owners and are taken on a profit-sharing basis. The Dhangar is entitled to 50% of the new lambs born during migration. The mortality rate for sheep is around 10-15%, while the life expectancy is 8-10 years. Sheep start breeding from the age of six months upto 5-6 years of age, and reproduce twice a year. From the age of 2½ months the lambs are sheared. Shearing is done 3-4 times a year, yielding 1-2 kgs. of wool. Tables 1 and 2, indicate the assets of the Dhangars, and the main components, both human and animal of a *Dhangar Wada*.

SEASONAL MIGRATION PATTERN OF THE BANJARAS

Ever since the Banjaras gave up their purely nomadic way of life, they have engaged in seasonal migration in pursuit of

labour work. The cattle they rear, particularly bulls are used mainly as beasts of burden. Table 3 indicates the productive assets of the Banjaras, both in land and animal wealth, while Table 4 gives the percentage of families migrating for various kinds of labour.

The average land-holding of Banjara families rarely exceeds 10 acres of dry land, which barely provides sustenance for 2-3 months. Of the different kind of labour work available, sugarcane harvesting attracts maximum people. The Banjaras find this most profitable as they are assured of employment for 6-7 months, with family accommodation being provided on the sugar factory premises, while free fodder from sugarcane leaves is made available to support their cattle during the period of their migratory stay. After deducting expenses, each family returns home with Rs. 2,000-3,000 in cash. They work on labour contract which a 'Mukadam' undertakes with the sugar factory. A family with a cart and a pair of bulls can receive advance payment of upto Rs. 1,500/- before the commencement of the crushing season, to provide for the maintenance of the family members who stay behind (Fig. 3).

Though over 95% of the families participate in seasonal migration, only those families who go to the sugar factories or for stone breaking, carry their animals and bullock carts. Nearly, two-thirds of their bulls and cows accompany the 'Tanda' during migration. Table 5 and figure 2 show the spatio-temporal pattern of seasonal migration during the last 150 years.

At the time of first settlement, opportunities for employment as agricultural labour were virtually non-existent. This was so because in the absence of irrigation, a single crop of jowar was all that cultivated. Wheat harvesting in nearby areas provided employment for 1-2 months. After this, until the arrival of rains, the Banjaras undertook the risky operation of cutting

TABLE 3

Temporal Pattern of Banjara Migration

Time Period	Type of Labour Work	Nature of Migration	Limits of Migration
Pre-historic 600 BC to 1500 AD	Chief occupation Ladeni i.e. long distance transport of goods on pack bullocks	Pure Nomadism exten- sive, continuous type of movement.	Along old trade routes covering vast areas of Asia Minor, and all over India
1500 AD—1850 After setting in Rajasthan	Ladeni continues, travell- ing as itinerant groups, mainly as suppliers of foodgrains on pack bul- locks to conflicting Moghul and maratha Armies	Lasting 2-3 years before returning home in Raja- sthan	All over the country, Parti- cularly the Deccan and South India
1850—1940 After permanently settling at Nandgaon	Ladeni collapses with the advent of rail and road transport. Switch over to seasonal migration for : 1. Wheat harvesting 2. Cutting and trans- porting timber logs across Western Ghats to ports in Konkan. This was also called <i>Konkan Karne</i>	Seasonal, lasting 6-7 months in the year, commencing after Diwali till beginning of rains in June	1. For wheat harvesting to Nasik, Khandesh. Marathwada (2-3 months from Decem- ber to February) 2. For cutting timber logs : slopes of Western Ghats near Igatpuri and Dindori. Transport of logs through the Ghoti pass near Igatpuri to Kalyan, Vasai etc. in Konkan
After Irrigation (Upto 1960)	Sugarcane harvesting and raw sugar or Gur making	Seasonal Migration from Diwali upto March- April	Bardoli in Gujarat, Khan- desh, Nasik, Sangamner, Rahuri and Ahmednagar areas
After large scale establi- shment of co-operative Sugar factories in Maha- rashtra	1. Harvesting cane and transporting it to the Sugar factories 2. For earth work and construction work 3. Stone cutting	Seasonal lasting from Diwali to end of May Seasonal Migration December-June Seasonal Migration December-June	Ravalgaon, Sahada, Nasik, Pachora, Chalisgaon, Kannad, Rahuri, Sangam- ner, Puntamba, Ahmed- nagar Nasik, Jalgaon, Bombay, Thane, Chalisgaon Nasik-Chalisgaon

TABLE 4

Productive Assets : Land, Animal, Wealth and Other Details of the Banjara Population
(For the six Case Study Villages in Nandgaon Tehsil)

Sr. No.	Village	Total Banjara Population	Time of Arrival of Banjaras (Years)	Study villages in Nandgaon (Tehsil) Land Ownership Pattern (in acres)			Total Land held	Average Land holding per family
				Purchased	Lease (Nawade)	Encroached		
1	Dheku (kh)	422	150	959	75	337	1296	10.36
2	Kasari	497	175	578	131	220	947	11.83
3	Kasab Kheda	892	95	679	125	68	872	6.33
4	Naydongri	2387	160	1123	385	428	1936	8.68
5	Pimparkhed	392	130	319	120	82	521	14.40
6	Pohi	219	85	583	40	97	770	21.86

CATTLE WEALTH :

Sr. No.	Bulls	Cows	Buffaloes	Goats	Total No. of Animals
1	125	33	5	47	242
2	134	48	9	35	226
3	185	38	12	35	270
4	257	40	35	50	402
5	128	22	10	32	192
6	105	24	6	41	178

timber from the forests of the Western Ghats and transporting the logs to the ports in the Konkan on pack bulls. With the commissioning of a number of irrigation works, cash crops, particularly sugarcane was introduced on a large scale (Fig. 4). This provided labour work, both for cane harvesting, and in raw sugar or ' Gur ' making. The Banjaras gave up operation ' Konkan Karne ', as transporting logs to Konkan was called, and migrated mainly to areas where sugar factories had come up. Thus, after the 1960's, the destination of migration is primarily to sugar factories, covering a maximum distance of 200-250 km.

from Nandgaon. Only young couples, chiefly those not owing bullocks and carts go to the urban areas for earthwork or construction, because in the metropolitan areas of Bombay and Thane, though wages are better, accommodation is always a problem. Stone cutting or metal breaking is a speciality of the ' Dhadi ' Banjaras, a sub-caste which is considered lower in the caste hierarchy. They travel along the road and railway lines in search of work of metal breaking.

The economy of the Banjaras for the larger part of the year is tied to seasonal labour. Another compulsive forces for

TABLE 5

Percentage-wise Migratory Families with Labour Sub-Divisions among the Banjaras

Sr. No.	Village	% of Migratory Families to Total Families in Tanda	Division of Labour (% wise)			
			Cane Harvesting	Earthwork	Construction	Stone Work
1	Dheku (Kh)	98.40	54.42	24.21	11.97	9.37
2	Kasari	92.50	84.92	15.07	4.63	11.01
3	Kasabheda	95.58	55.30	27.81	4.38	12.40
4	Nayadongri	86.09	51.74	13.81	7.17	15.42
5	Pimparkhed	85.71	62.17	27.63	—	10.19
6	Pohi	97.22	93.90	—	—	6.09

seasonal migration is the survival of their animals, with fodder becoming increasingly scarce. The recent trend of migration to the sugar factory areas is good as it relieves a lot of pressure on the already depleted and degraded reserve forests and grazing runs. In the absence of alternative opportunities for employment (the majority of the Banjaras being illiterate as literacy rate is less than 4%), little change in their mode of existence can be visualized in the near future.

SOME OBSERVATIONS

Based on empirical data collected at the micro-level for Nandgaon tehsil, it appears that a considerable area in the Sahyadrian rainshadow is affected by seasonal migration. At least 20% of the population in the area is spatially mobile and derives the major part of its subsistence from a migratory pattern of livelihood.

The two spatially mobile groups settled in Nandgaon are the Dhangars and the Banjaras. The Dhangars are primarily a mobile sheep herding community of Maharashtra, while the Banjaras are a former itinerant group who rear pack animals especially bulls, and engage in seasonal labour migration. Together, they number 19,000, in the tehsil, of which at least

90-95% migrate seasonally. Their herd animals, mainly sheep total 10,000 while the cattle number 1,500. They keep horses for carting their household effects and dogs for guarding their sheep.

In the paper, their principal subsistence strategies have been studied with a view to illustrating the complex network of natural and human factors, which must be understood, if environmental degradation is to be arrested and restoration activities are to become meaningful. Statistics were compiled to assess the effects of the various human and animal parameters operating in the process of seasonal migration. These point to an adverse man-animal ratio in relation to the size of pasture and quantum of fodder in the area. Opinions on the issue of ecological degradation, differed radically with ours during interviews with the Dhangars—they blamed the reduction in rainfall as the major cause of fodder stress and not over-grazing—though we felt that it does not need a shepherd's trained eye to notice the devastated pastures on the slopes, crisscrossed by paths beaten into the hillsides by thousands of destructive hooves.

Despite the Dhangar's natural reluctance to discuss their profits one is aware that meat and wool command a high price in an

ever expanding market. This is enough ground to encourage them to persist with their traditional vocation. Only, there is need for imaginative planning to regulate grazing of village livestock. Stall feeding though desirable, does not appear to be an immediate solution, because of the small size of holdings and high animal-man ratio.

Surprisingly, though everyone we spoke to complained bitterly of the privations of a migratory way of life, few seem to think it was possible to give it up altogether; saying it was in their blood. The ethos of the Dhangar and Banjaras appears fairly flexible and amenable to change, though they are largely illiterate (fewer than 4% are literate).

We have not been able to decipher the full spectrum of the damage to the ecology, but what is certain is that the future of shepherding, in the face of increasing fodder stress, appears dismal. It seems that the Dhangars as a community are facing a losing battle over the centuries, but more so now when one views this in the face of

extension of cultivation with the advent of the new agricultural revolution. One finds widespread enclosure of waste lands, depletion of free grazing runs, these being copped and over-grazed, their sizes shrunk as they have become the territory of forest departments or the village panchayats or have been put to cultivation. No man's lands and unoccupied waste lands have vanished altogether and encroached upon long ago. With the tremendous pressure on land the Banjaras have resorted to alternative non-pastoral means of income through labour work, while the Dhangars have evolved a symbiotic relationship with the farmers. The farmers allow them to browse their flocks on stubble left over from the harvested fields, for the reciprocal service of penning their sheep in the farmer's fields for manuring which is in great demand.

It is interesting to note the manner in which two communities, faced as they are by the extreme paucity of fodder, have adapted and re-adjusted their subsistence stratagems.

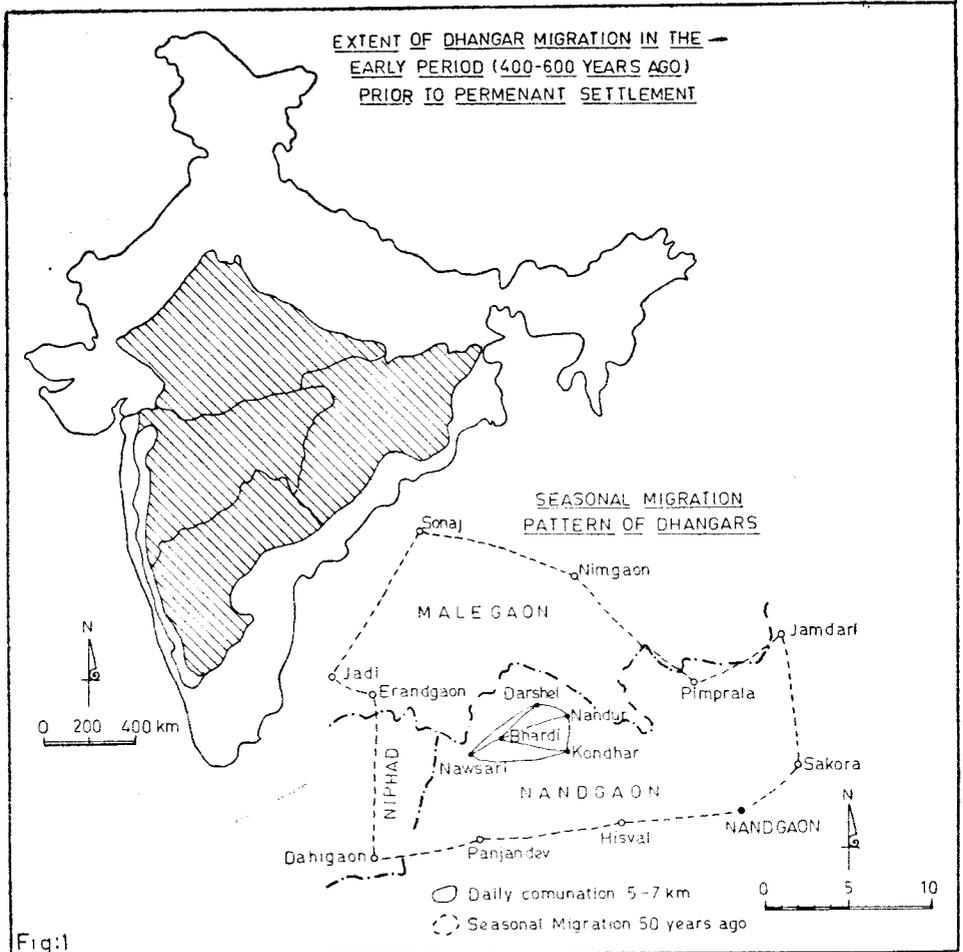
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CASE STUDY VILLAGES

• BANJARA TANDA

- 1- Dheku
- 2- Kasari
- 3- Kasbheda
- 4- Naydongri
- 5- Pimparkhed
- 6- Pahi

▲ DHANGAR WADAS

- 1- Kondhar
- 2- Parekarwadi
- 3- Hakewadi
- 4- Bhardi
- 5- Darhel
- 6- Boyegaon

Seasonal Migration Cycles

..... } Eastward Cycles

xxx } Eastward Cycles

----- } Westward Cycles

x-x-x } Westward Cycles

▨ Reserve Forest

• One day Halt

● Major Halt

Seasonal M
Dhangars in

DANGS

SATMALA HILLS

● CHANDWAD

Rainfall
500mm

Panjan R.

● MANMAD

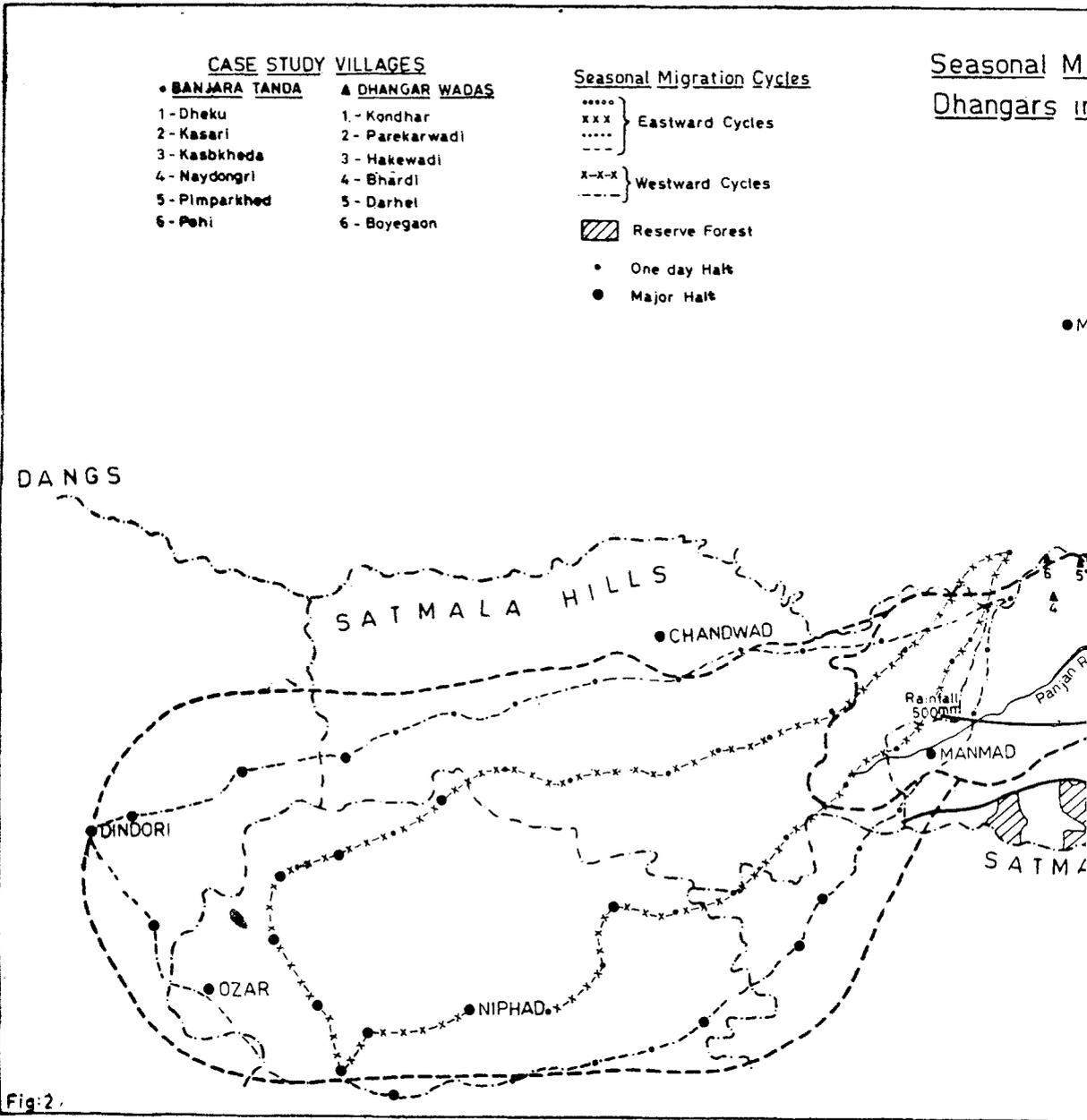
SATMA

● DINDORI

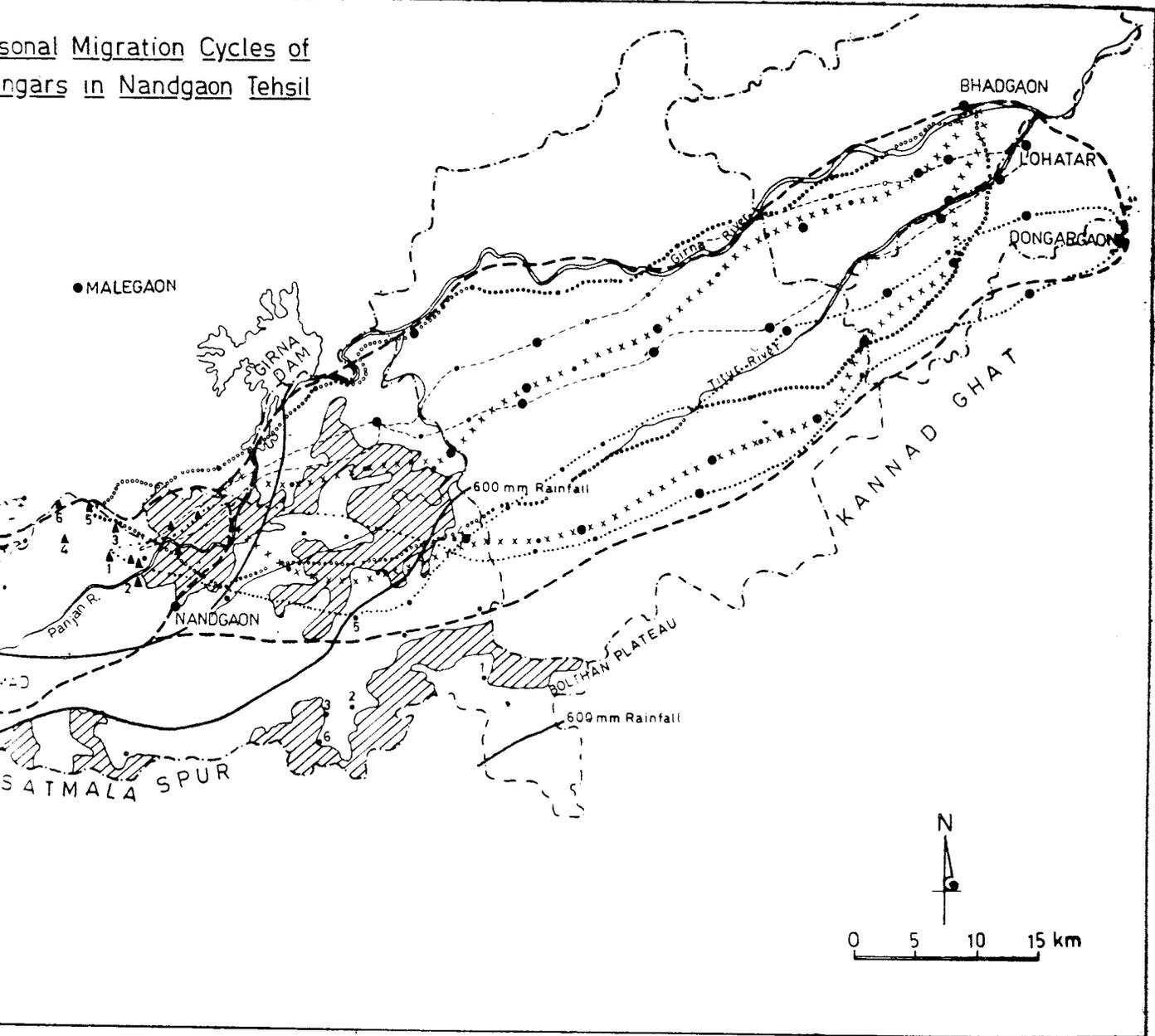
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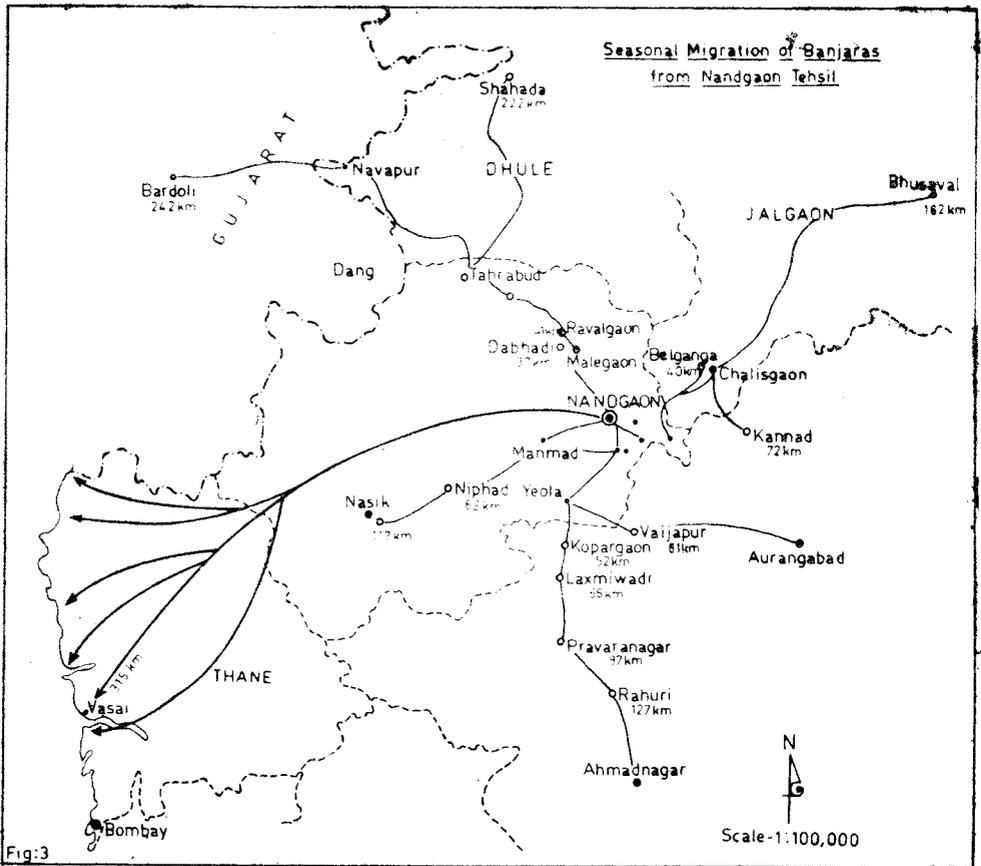
● NIPHAD

Fig:2.



Seasonal Migration Cycles of
Gingars in Nandgaon Tehsil





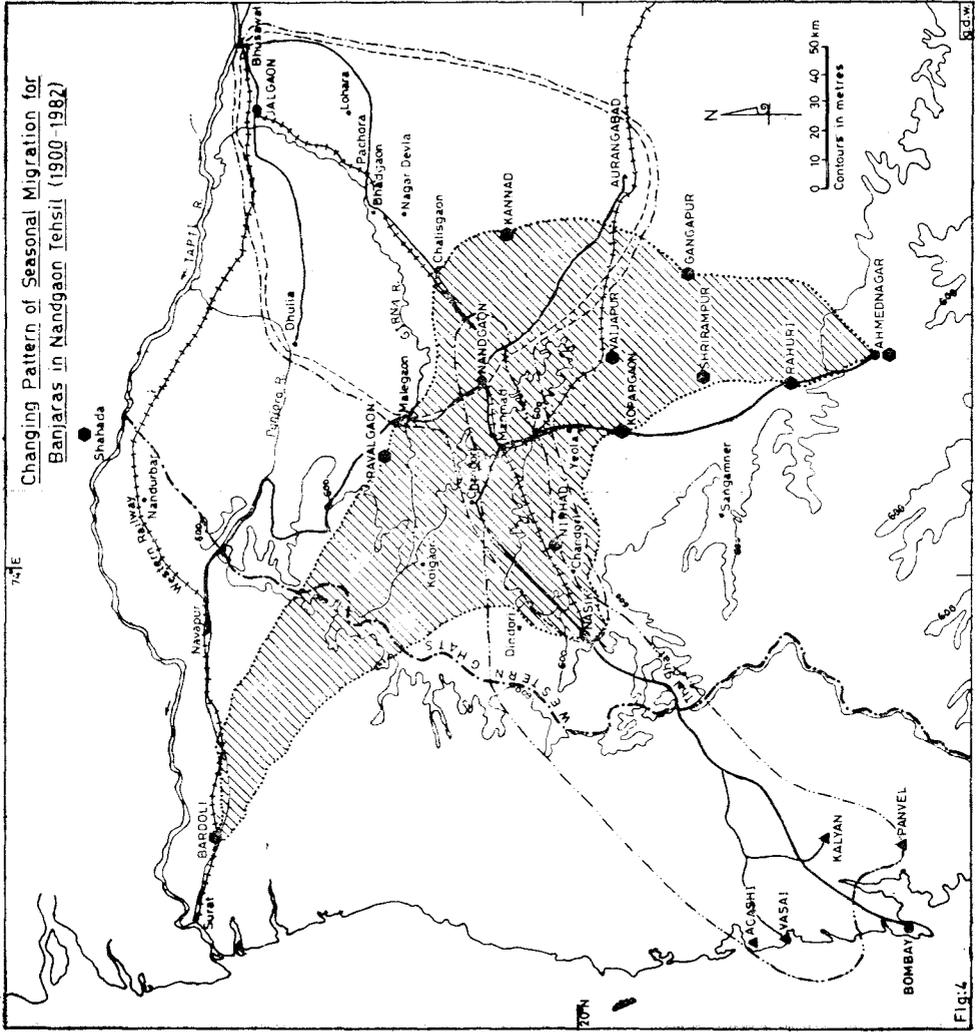


Fig. 4