Mesolithic India

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HUMAN SKELETONS AT LEKHAHIA

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Introduction

Lekhahia, located 69 km from Mirzapur and three km southeast of Bhainsore village to the east of the Great Deccan Road, has a cluster of five rockshelters in Mirzapur District of Uttar Pradesh (Fig. 1). In 1964, Rock Shelters I and II were excavated by V.D. Misra of the Department of Ancient History, Culture and Archaeology, University of Allahabad under the direction of the late Professor G.R. Sharma. This paper briefly reviews the bio-cultural features of the Mesolithic human skeletons from Lekhahia giving specific attention to how they compare with Mesolithic foragers from the Gangetic Plain.

Excavations and Archaeological Recovery

Of the five rockshelters constituting the Lekhahia group, the two, Rock Shelter I (Plate I) and Rock Shelter II, were selected for excavation. From Rock Shelter I were obtained seventeen fragmentary remains of human burials placed within a space of 52 m X 25 m with a thickness of 43 cm (Sharma 1965, Misra 1977). On the basis of the stratification, superimposition of one burial upon another and overlapping of the graves, 14 out of the 17 human skeletons were assigned to 8 periods. Microliths, both geometric and non-geometric, were found. Pieces of red ochre and weathered laterite nodules were also obtained from the shelter. These could have provided colour for paintings. Walls and ceiling of the shelter are decorated with paintings of animals, hunting scenes and processions (Plate II). The shelter was disturbed by extensive pits yielding pottery and iron objects (Sharma 1965: 78).

Source: Misra, VD & Pal, JN (2002) ***Mesolithic India***. Allahabad: Department of Ancient History, Culture & Archaeology, University of Allahabad. pp. 261-288.

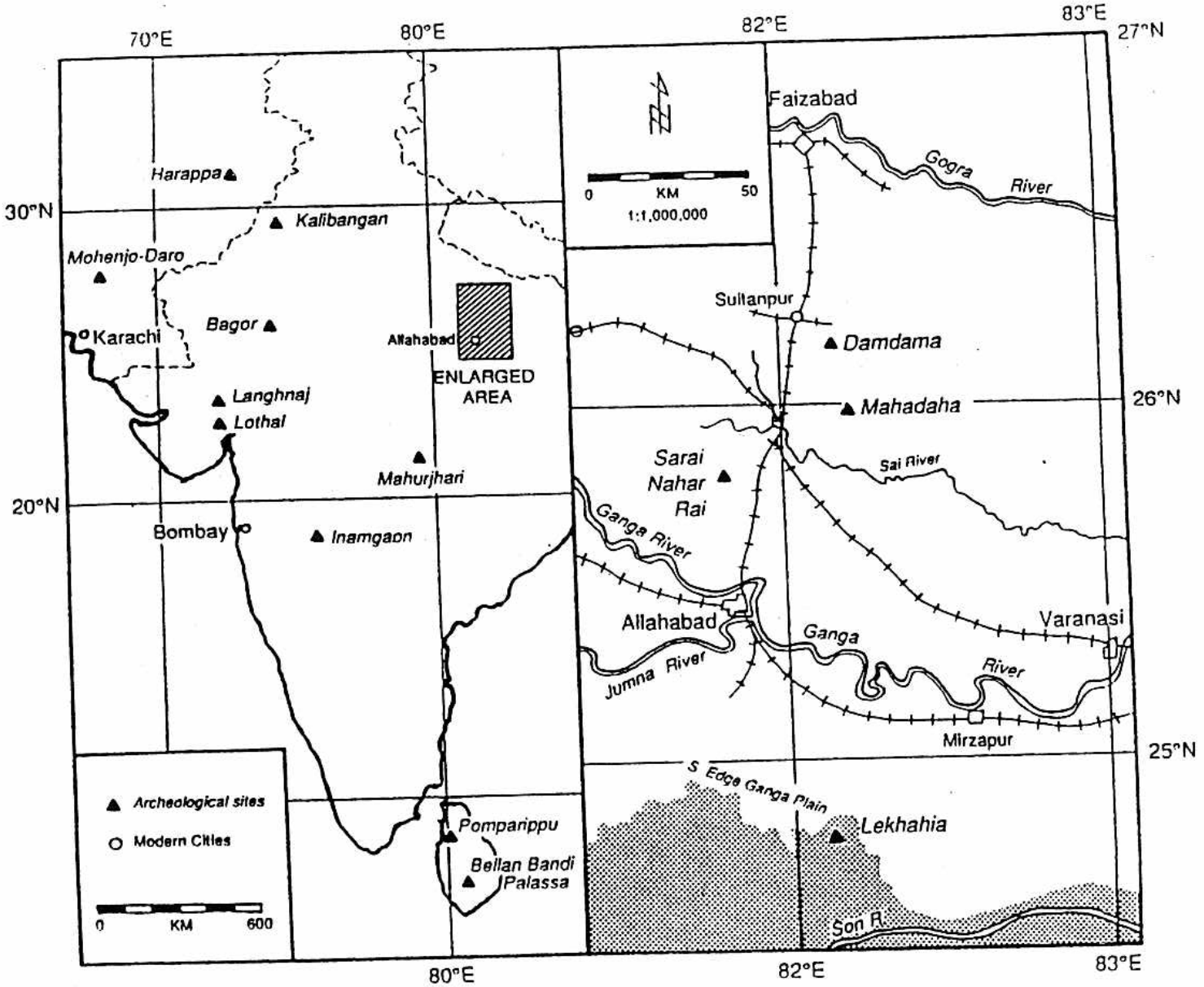

Fig.1 . Location Map of Lekhahia

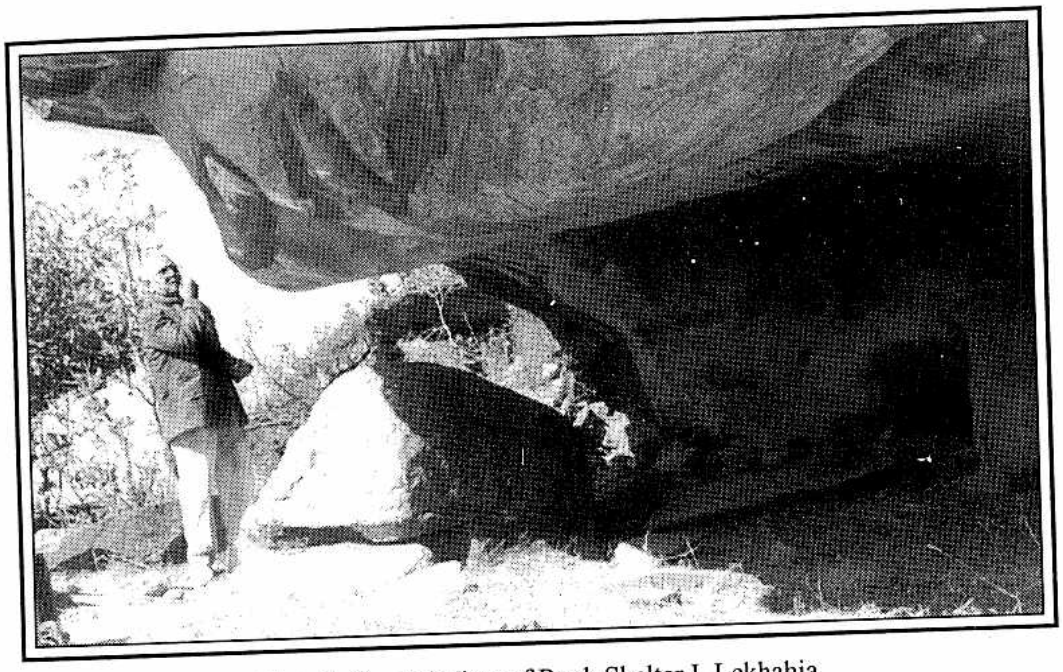

Plate I. General View of Rock Shelter I, Lekhahia

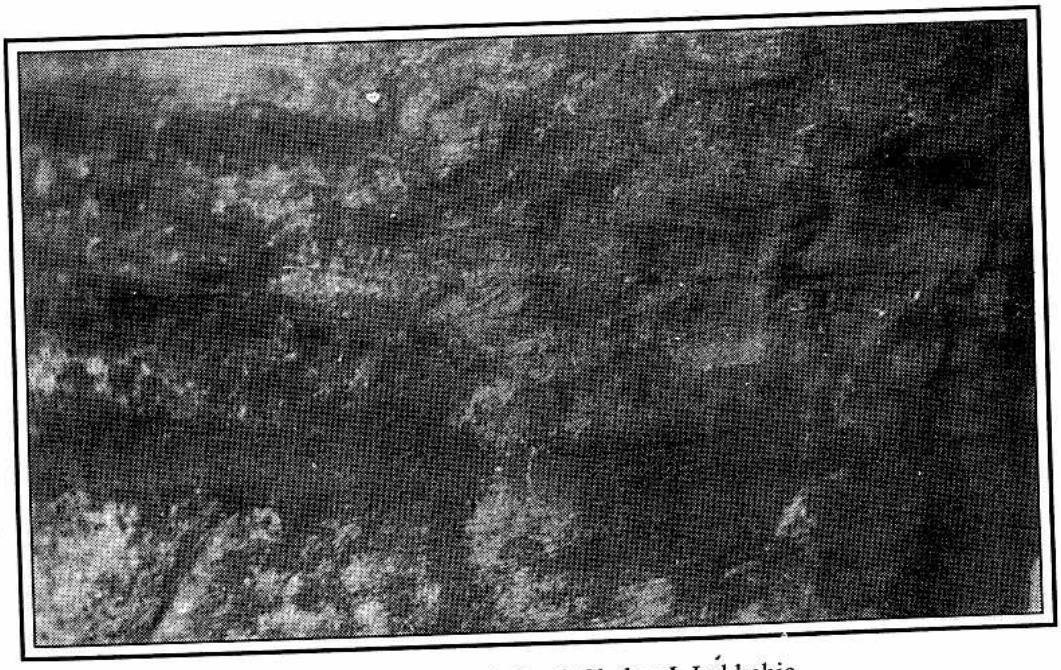

Plate II. Paintings in Rock Shelter I, Lekhahia

In Rock Shelter II, a habitational deposit of 20 cm was constituted by four layers. Geometric and non-geometric microliths and potsherds were obtained from this shelter.

Three trenches were laid out in the open-air settlement of the Mesolithic people at Lekhahia. Of these, two Lekhahia 1 (LKH-1) and Lakhahia 3 (LKH-3) measuring 7 X 3 m each, yielded almost identical results (Sharma 1965: 76-77). The total accumulation of 1.1 m above the bed rock was divisible in nine layers, of which eight were implementiferous. These afford evidence of four stages in the microlithic industry at the site (Fig. 2). The microliths from layers 8 to 7 consist of unretouched blades, blunted backed blades, points, lunates and scrapers fashioned mostly on cherty material. These are non-geometric and unassociated with pottery.

The microlithic assemblage of layers 6 and 5 is mainly non-geometric though it also contains geometric tools (triangles only). These two layers did not yield any pottery.

Layers 4 to 1 yielded geometric tools, comprising triangles, trapeze and handmade pottery. The tools from these layers represent two stages, so far as their size is concerned. The tools of layers 2 and 1 are diminutive in comparison to their counterparts of layers 4 and 3.

The above stratigraphy was also partly confirmed by the excavation of Lekhahia-2. A trench measuring 6.2 X 3.1 m was laid to the north of Lekhahia-1 and Lekhahia-3. The habitation deposit, 48 cm in thickness, comprised four layers. The top layer alone yielded triangles unassociated with pottery. In the underlying layers both the geometric microliths and pottery were absent. The excavations at Lekhahia have, thus established the following sequences of the Mesolithic culture at least in parts of Mirzapur:

Phase I	Non-geometric pre-pottery microliths heavily patinated
Phase II	Geometric tools (triangle alone) without pottery.
Phase III	Geometric tools (triangle and trapeze) with pottery.
Phase IV	Geomertic and diminutive tools with pottery.

Human Skeletons

The valuable collection of human skeletons from Lekhahia has escaped the attention of biological anthropologists for thirty years until 1994. These silent skeletons have effectively concealed precious evidence of late Mesolithic subsistence and

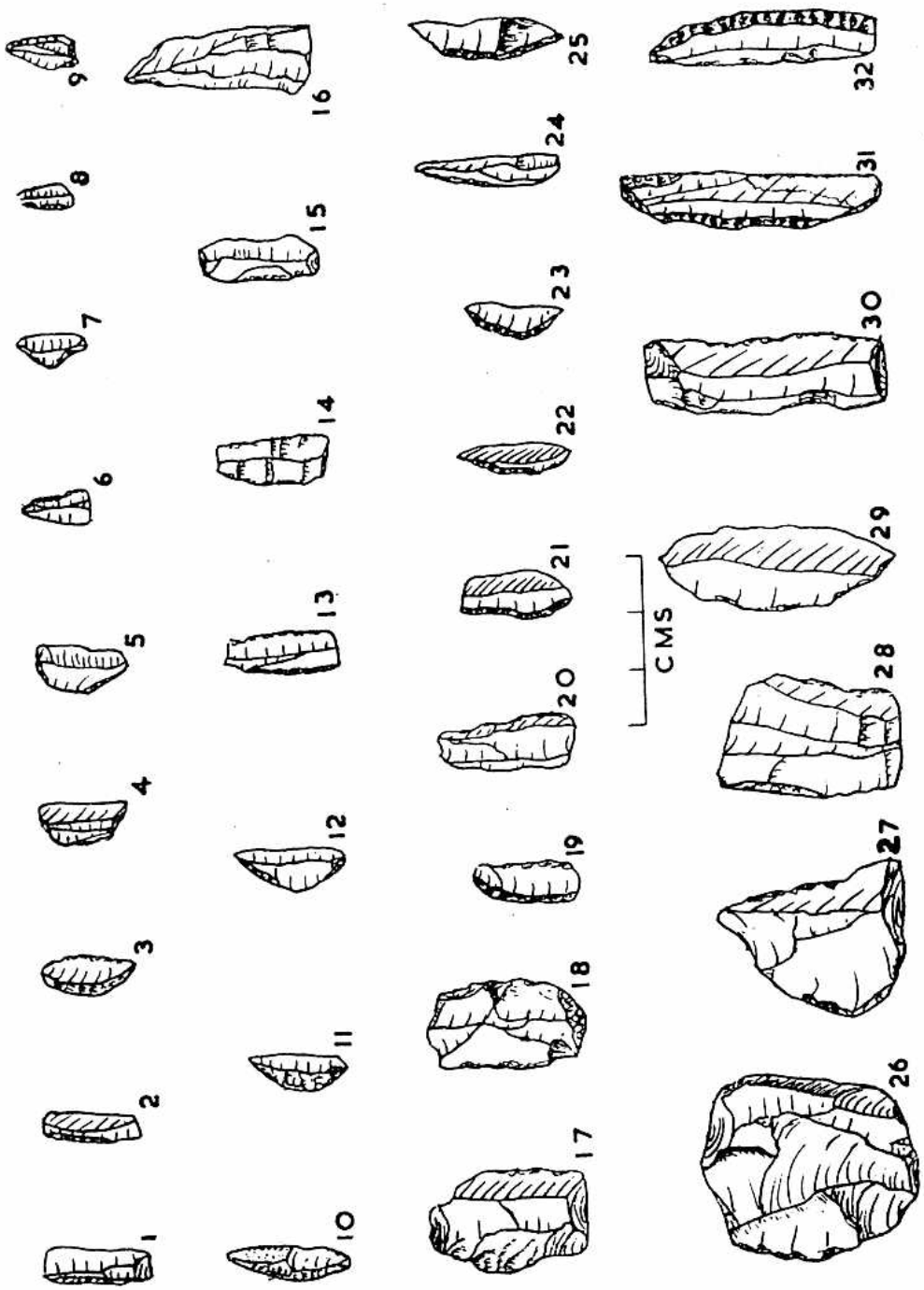

Fig. 2. Microliths from Lekhahia: Geometric with Pottery and Diminutive 1-9, Geometric without Pottery 10-16, Non-geometric without Pottery 17-25, Transitional (from Upper Palaeolithic to Mesolithic) 26-32.

behaviour from prehistorians and anthropologists. There are several site-specific reasons why this collection has not previously received the attention it deserves from biological anthropologists:

1. some of the burials are disturbed,
2. few skeletons are complete and well preserved,
3. many bones are fragmentary and incomplete,
4. bones from more than one individual are commingled, and
5. antiquity of the site is not precisely known.

These factors present methodological and analytical challenges to the investigator and may have discouraged anthropologists from attempting an evaluation of the Lekhahia remains. Furthermore, within a few years the finds at Lekhahia were eclipsed by numerous better preserved human remains from undisturbed burials encountered at Sarai Nahar Rai, located in the Gangetic Plain north of Allahabad. The site provided a spectacular quadruple burial, an aceramic culture with geometric microliths, and the promise of an early Holocene antiquity. For more than two decades these factors re-directed paleoanthropological interest from Lekhahia in the Vindhyan Hills to Sarai Nahar Rai, and latter Mahadaha and Damdama in the Gangetic Plains (Pal 1985, 1988). These historical and preservational obstacles are not insurmountable problems, yet they have delayed from too long a full reporting of the human remains from Lekhahia. The only previous analysis of the Lekhahia skeletal series was conducted by P.K. Seth (ms), whose descriptive catalogue of the remains includes preliminary age and sex estimates and comparative morphological observations. Notably absent from Seth's preliminary study are osteological and dental measurements, and systematic observations of skeletal and dental pathology. It is our contention that a careful analysis of the Lekhahia skeletal series has the potential to unravel secrets regarding the diet, health, and behaviour of late Mesolithic people of north India.

This analysis of the Lekhahia skeletons seeks to answer questions about diverse aspects of human biology and culture during the late Mesolithic of north India. Key questions include:

1. Do the human burials provide evidence of funeral practices and cultural treatment of the deceased?
2. What is the demographic structure of the Lekhahia skeletal series?
3. Can diet and subsistence be ascertained from pathological lesions of the bones

and teeth?

4. Are the people of Lekhahia as tall and robust as Mesolithic foragers of the Gangetic Plains? and
5. Do the Lekhahia skeletons display any unique or distinctive features indicating behavioural patterns or occupational stresses?

This analysis of the Lekhahia skeletons adopts a theoretical research orientation known as the bio-cultural method or bioarchaeology. The bio-cultural approach to peoples of the past strives to integrate cultural insights derived from archaeology, with biological inferences derived from human skeletons. The bio-cultural approach originated in response to the excavation and analysis of Native American mortuary sites and skeletal remains. This perspective on past cultures has historical depth (Buikstra 1991), a well-established methodology (Huss-Ashmore *et al.* 1982, Larsen 1987, Powell *et al.* 1991), and has dramatically improved our knowledge of the dynamic nature of biological and cultural change in prehistory (Powell, 1988, Storey 1992). While at the cutting edge of anthropological research, the bioarchaeological approach has not been extensively employed in the analysis of Old World cultures, cemeteries and human skeletal samples. In Asia a few notable exceptions include the University of California excavations of the cemetery at Harappa, Pakistan (Dales and Kenoyer 1993, Lukacs 1992) and the excavation of the early farming village of Inamgaon in India (Dhavalikar 1988, Lukacs and Walimbe 1986). The bio-cultural research method provides a more holistic picture of past peoples and provides results that directly impact broader archaeological and anthropological theories and issues.

Chronology

The antiquity of north Indian Mesolithic sites in the Vindhyan Hills, and in the Gangetic Plains remains unclear (Possehl and Rissman 1992). Although several dates have been reported, they are based on unsuitable material such as shell and uncharred bone, and are regarded with considerable skepticism. Bone samples from Lekhahia skeletons VI and XVII were analyzed at the Tata Institute for Fundamental Research, and yielded dates of 1710 ± 110 B.C. and 2410 ± 115 B.C. (Agrawal and Kusumgar 1969, Misra 1977). Reported in uncalibrated years B.P. these dates are 3560 ± 110 B.P. and 4240 ± 105 B.P., respectively (Kennedy *et al.* 1986, 1992). Cultural evidence associated with the human remains at Lekhahia includes geometric microliths, and though pottery is present (Misra 1977: 96), "... no positive statement can be made about the association of pottery with these burials." However, Mr. Gupta's fieldnotes state that the pottery, ash and charcoal in a pit adjacent to skeletons VI and VII are intrusive from a later period (Gupta ms: 10-11). Two C^{14} dates, determined by

accelerator mass spectrometry on carbon from human bone apatite, became available after this paper was completed (see Table 1). These dates, which are based upon thorough pre-treatment and sample preparation methods, suggest that the skeletons from Lekhahia may have an antiquity two times greater than previously believed. Assessment of additional skeletal samples are planned to confirm these early Holocene dates, the implications of which will be discussed in a separate publication.

Table 1. Chrono-Stratigraphic Position of Lekhahia Burials

Phase	Layer	Skeletons[1]	Absolute Dates
Four	1	II	
	2	III	
Three	3	IV	Geochron: 8,370 ± 75 B.P.[3]
	4	V, VIII, IX, XI	TF-417: 3,560 ± 110 B.P.[2]
Two	5	X, XII, XIV	
	6	XIII, XV	Geochron: 8,000 ± 75 B.P.[3]
One	7	XVI	
	8	XVII	TF-419: 4,240 ± 115 B.P.[2]

1. "The skeletons numbered as I, V and VIII were found in a very fragmentary condition and their stratigraphy could not be assigned to a definite period." (Sharma, 1965:78)
2. Initially reported in Agrawal and Kusumgar (1969), and subsequently cited by Agrawal and Kusumgar (1974), Mandal (1972) and Possehl and Rissman (1992).
3. Determinations provided by Kreuger Enterprises, Inc., Geochron Laboratories division, Cambridge, MA, on biogenetic carbon from apatite of bone from skeletons LKH-4 (GX-20983-AMS) and LKH-13 (GX-20984-AMS). These dates and their significance for understanding the adaptations and bio-cultural dynamics of north Indian Mesolithic people will be discussed elsewhere.

Treatment of the Deceased

The following discussion of human burials at Lekhahia is based upon Gupta's field observations, which were recorded in his unpublished manuscript (Gupta ms). The salient features of this report are summarized in Table 2 and in the mortuary analysis below.

Burials at Lekhahia are commonly in an extended supine position with the predominant orientation West-East (11/17; 64.7% skull to the West). Four burials yielded evidence of positioning the limbs. In two burials the right arm was flexed 90 degrees at the elbow and the forearm lay across the abdomen, and in one burial both arms were tightly flexed with hands on the chest (Gupta ms). In five burials, preparation of the grave pit involved cutting bedrock from the shelter floor.

Table 2. Field Evaluation of Human Skeletons from Lekhahia[1]

Grave	Orientation	Posture	Associated Finds	Sex	Age
I	Disturbed	?	----	?	?
II	South – North	Supine	Animal bones (deer), Mollusc	?	Child (6-8 years)
III	West – East	Supine, face toward south	----	Male	Adult
IV	West – East	Supine, Leg Flexed	----	Female	Adult
V	West – East	Supine, with pillow stone	Bos bubalus rib	Female	Adult
VI	Disturbed	?	Deer hoof	?	Adult
VII	West – East	?	Bone tool(?)	?	Adult
VIII	Disturbed	?	Turtle scute	Male	Adult
IX	West – East	Supine, with pillow stone	----	Male(?)	Adult
X	West – East	?	Kankar nodules	Male	Adult (50-55 years)
XI	Disturbed	?	----	Male	Adult
XII	South – North	Supine	----	Male(?)	Young adult (18-20 years)
XIII	West – East	Supine, face toward SE	----	Female	Adult
XIV	West – East	Supine	----	Male	Adult
XV	West – East	?	----	Male	Adult
XVI	Disturbed	?	----	Male	Adult
XVII	West – East	Supine	Kankar nodules	Male	Adult

1. Table compiled by Lukacs from descriptions provided in Gupta (ms).

Table 3. Age at Death Distribution

Age Class	Class Name	n	Specimens in Class
perinatal	neonate	1	14c
4 – 5 years	child	1	16b
12 – 17 years	adolescent	3	14b, 16a, 17
18 – 25 years	young adult	6	1a, 2, 3, 7a, 9a, 10a
26 –45 years	middle-aged adult	4	6a, 6c, 8, 13
=> 46 years	old adult	4	4a, 5, 6b, 11
Uncertain	adult	8	1b, 4b, 7b, 9b, 10b, 14a, 15a, 15b

Two burials (V and IX) had pillow stones supporting the skull. And two graves (II and V) are regarded as containing grave goods in the form of bovid and cervid bones, antler, and mollusc shells (Misra 1977). The isolated occurrence in single burials of a tortoise scute (Burial VIII), cervid hoof (Burial VI), and bone tool (Burial

VII) may constitute further evidence of burial goods. Cultural practices regarding disposal of the deceased at Lekhahia reveal a funerary tradition that shares many features with Mesolithic sites of the Gangetic Plains. Placement of the body in a west-east orientation is a practice consistent with the most commonly observed orientation at Sarai Nahar Rai, Mahadaha (67.9%, 19/28), and Damdama (65.2%, 30/46) (Pal 1992). The arrangement of arms across the abdomen, and the meager nature of grave accoutrements are also in agreement with the evidence available from Mesolithic sites in the Gangetic Plain. Funerary practices observed at Lekhahia are therefore interpreted to be indistinguishable from those employed by Mesolithic foragers of the plains. Funerary behaviours and practices at Lekhahia, Damdama, Mahadaha, and Sarai Nahar Rai appear to represent a single cultural tradition.

Demographic Structure of the Skeletal Series

While field observations by Mr. Gupta record evidence of seventeen graves (Gupta ms), skeletal data clearly indicate a minimum number of 27 individuals (Lukacs 1994). While some individuals are represented by an almost complete skeleton, evidence for other individuals is meager and in a few instances consists of a single bone or tooth. The age distribution of all skeletons from Lekhahia is presented in Table 3. All ages and sexes are represented in the human remains from Lekhahia. The sexes are equally abundant with 11 males and 10 females, however sex was indeterminate for eight individuals whose remains were fragmentary or incomplete.

The demographic structure of the Lekhahia skeletal series is similar to series from Damdama and Mahadaha in regard to the distribution of age at death. The prevalence of young adults is a common feature shared by these three sites. However, the presence of sub-adults at these three sites (DDM, MDH, LKH), stands in stark contract to Sarai Nahar Rai, where no infant, child or early adolescent specimens were recovered. The balanced sex distribution at Lekhahia contrasts with the preponderance of males (about 70% of sexed specimens) at SNR and MDH, but is similar to the more equitable sex ratio at Damdama. The absence of uniform age and sex distribution at each of the four Mesolithic sites is an irregularity more likely the result of random sampling error due to the small size of these skeletal series than it is to differential treatment of the deceased according to age, sex, or status. Similarities and difference in demographic structure between sites reflects stochastic processes, and should not be regarded as evidence supportive of either shared or unique behaviours or stresses between cultures.

Striking similarities in funerary procedures indicate that Lekhahia is culturally indistinguishable from the Mesolithic sites of the Ganga Plains. The demographic data

however, is uninformative and inconsistent. Variations in age and sex groups reflecting chance factors due to small size of skeletal series rather than differences in mortality and fertility patterns between sites. We now turn to bio-behavioural data and ask, "Can clues discernable in the bones and teeth at Lekhahia reveal significant insight into dietary patterns, growth and stature, and the stresses of a Mesolithic way of life?" and "Are the people of Lekhahia unique and distinct in diet, stature, and level of stress from their Mesolithic neighbours of the Gangetic Plain?"

Three kinds of biological data will be briefly presented for the Lekhahia skeletal series: (1) dental pathology and odontometry, (2) estimations of stature, and (3) skeletal trauma. A synopsis of assessments of age and sex, and noteworthy anatomical and pathological features of each individual specimen are presented in Table 4.

Dental Health and Odontometry

The relative degree of dental wear on the molar teeth was assessed using the Scott (1979) 'quadrant' method of evaluation. The mean wear scores are presented separately by sex in Table 5. Comparative Scott score values for males from Damdama and Mahadaha are also given and show that the LKH males display a slightly greater average level of dental attrition.

The full range of pathological dental lesions was observed for the Lekhahia skeletal series, and is reported by individual specimen in Table 6. The prevalence of seven conditions are presented here based upon individual count prevalences with sample size of 15 (see also Fig. 3). In addition to data for Damdama and Sarai Nahar Rai, dental pathology prevalence for Harappa is provided for comparison. The dental pathology profile of Lekhahia is generally consistent with profiles for other Mesolithic sites, especially in AMTL, calculus, and alveolar resorption (Table 7). Lekhahia shows low prevalences for caries, pulp exposure, and enamel hypoplasia. Of particular importance is the low individual count caries rates that typifies Mesolithic series, and contrasts with the high caries rate at Harappa. When caries rates are reported by tooth count the prevalence for Lekhahia is 0.5% (1/214), a value that is very low, yet appropriate for hunters and foragers that consume coarse unrefined foods. Tooth count caries rates at Damdama (0.9%; 7/800 teeth), Mahadaha (1.2%; 3/261), and Sarai Nahar Rai (0.0%; 0/114) are not divergent from the 0.5% value for Lekhahia, in fact they cluster tightly around it. Living and prehistoric human populations that display similar dental pathology profiles, and coincident dental caries prevalences, often exhibit closely corresponding subsistence patterns, food preparation methods, and dietary items. The clues derived from dental pathology strongly suggest that the people of

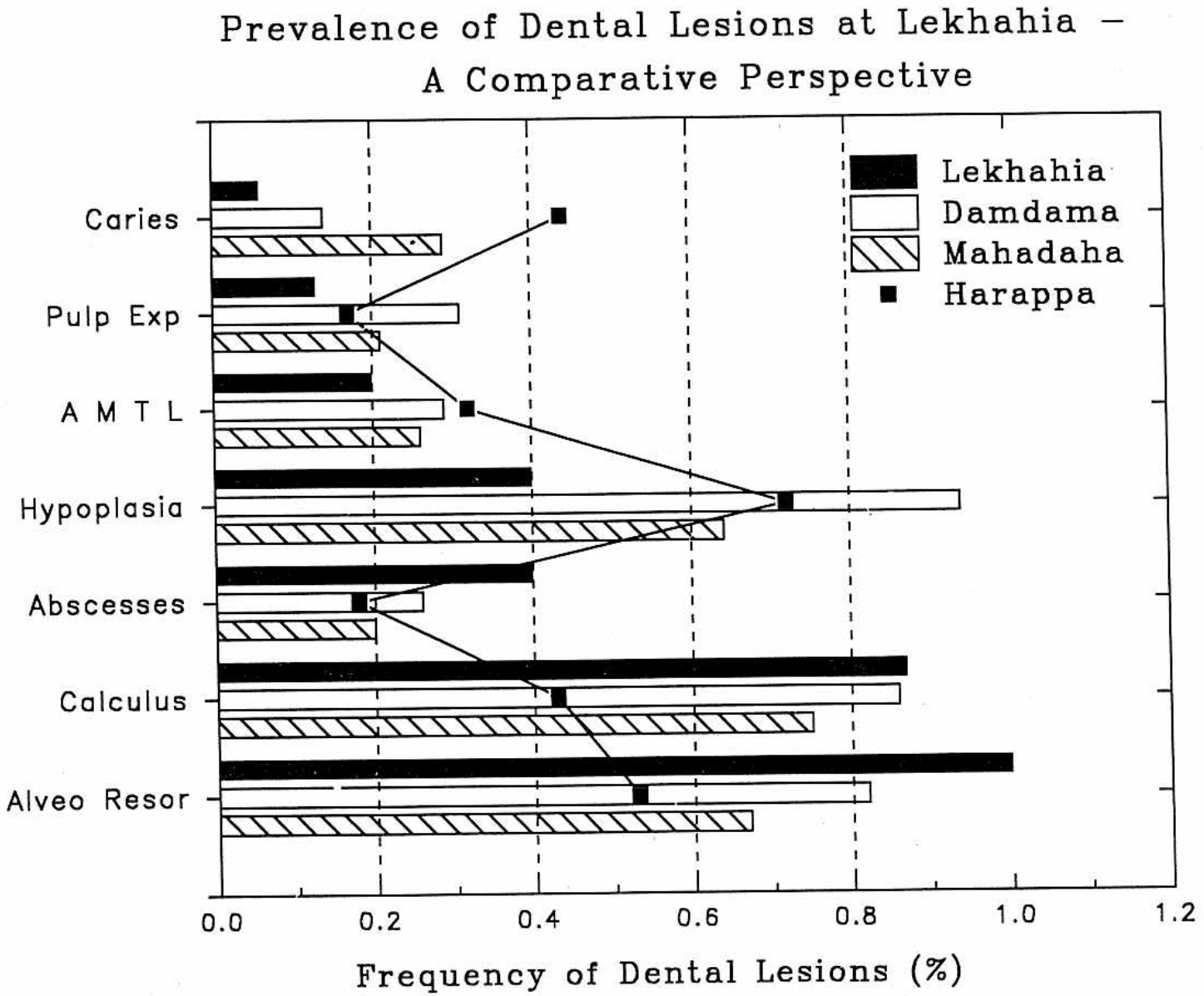
Prevalence of Dental Lesions at Lekhahia –
A Comparative Perspective
Lekhahia
Damdama
Mahadaha
Harappa
Caries
Pulp Exp
A M T L
Hypoplasia
Abscesses
Calculus
Alveo Resor
0.0
0.2
0.4
0.6
0.8
1.0
1.2
Frequency of Dental Lesions (%)

Fig. 3

Lekhahia subsisted by hunting and foraging, and that their culinary tool kit was limited. Furthermore, the resemblance in tooth count caries rates between Lekhahia and the Mesolithic people of the Gangetic Plains provides convincing support for parallel modes of subsistence and methods of food preparation, and perhaps dietary content as well (Illustrations of cranio-dental remains and pathological oral lesions are provided in Plates III - VII).

The progressive reduction in size and robusticity of the teeth and jaws is a long-term evolutionary trend that is inversely proportional to the increasing efficiency of subsistence and culinary technology. Our ancestors had large teeth and a fundamental food processing technology. The biting surface area of teeth is a crude measure of overall size of the dentition, and agriculturalists generally have smaller teeth than people that hunt and gather food. The mean tooth crown areas for individual teeth from Lekhahia, and composite areas for maxillary, mandibular, and total tooth crown area are provided in Table 8. Earlier studies of tooth size among Mesolithic skeletal series in the Gangetic Plain found that the males of Mahadaha (1321.7 mm^2) and Damdama (1396.1 mm^2) have large teeth that compare in size with Mesolithic skeletal series from Niah Cave (Borneo) and Zhoukoudian (China) (Lukacs and Pal 1993). The composite tooth size for Lekhahia males is 1353.5 mm^2, a value bracketed by the figures for MDH and DDM. The people of Lekhahia are characterized by a dentition that is appropriate in size for a hunting and foraging mode of subsistence. Chemical analysis of bone and tooth samples is currently in progress and will soon provide more insight into nutritional ecology of the Lekhahia specimens.

Estimation of Stature

Adult stature is the outcome of complex interactions between multiple genetic factors and variation in the nutritional environment during growth and development. The ability to precisely reconstruct the adult stature of prehistoric humans from their skeletal remains is limited by the fragmentary preservation of long bones and by methodological consideration. However, if the same procedures for stature estimation are used across all skeletal series being compared an accurate picture of relative stature can be obtained. Trotter's (1970) regression equations for people of European descent are used here to enhance comparability with stature estimates reported for Mahadaha (Kennedy *et al.* 1992) and Sarai Nahar Rai (Kennedy *et al.* 1986). The same formulas were used in the calculation of stature for the human remains from Damdama (Lukacs and Pal 1993), facilitating inter-group comparisons. The newly described procedure for estimating stature from tarsal bones (alcaneus and talus) Holland 1995) was also adopted since two individuals that lacked complete long bones were represented by

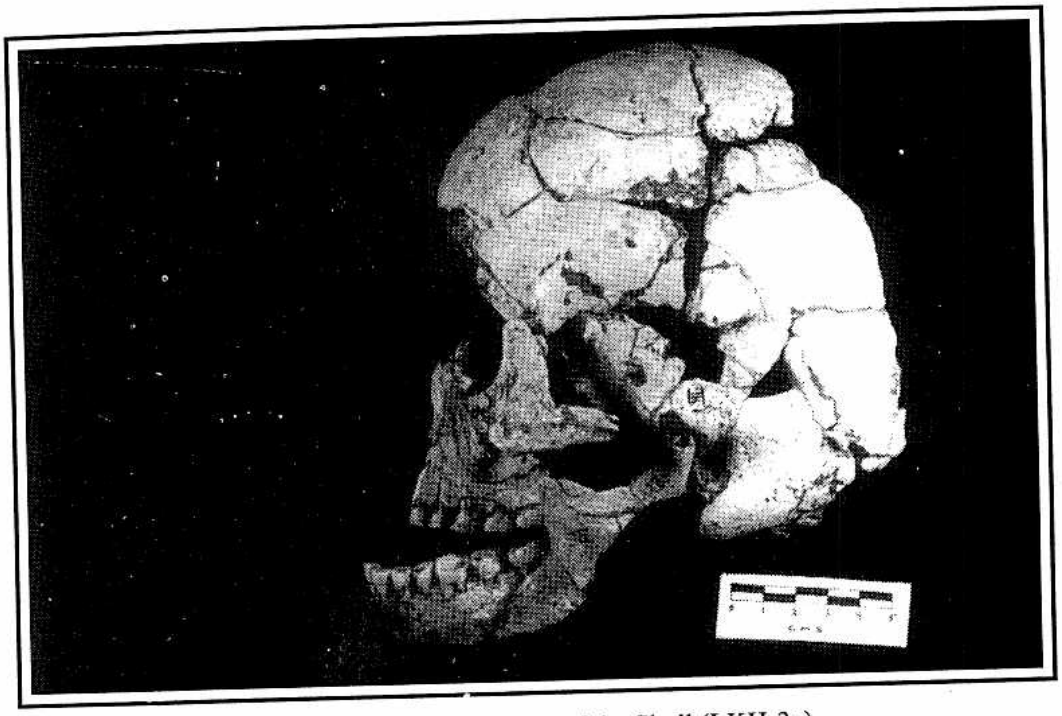

Plate III. Left lateral View of the Skull (LKH-3a)

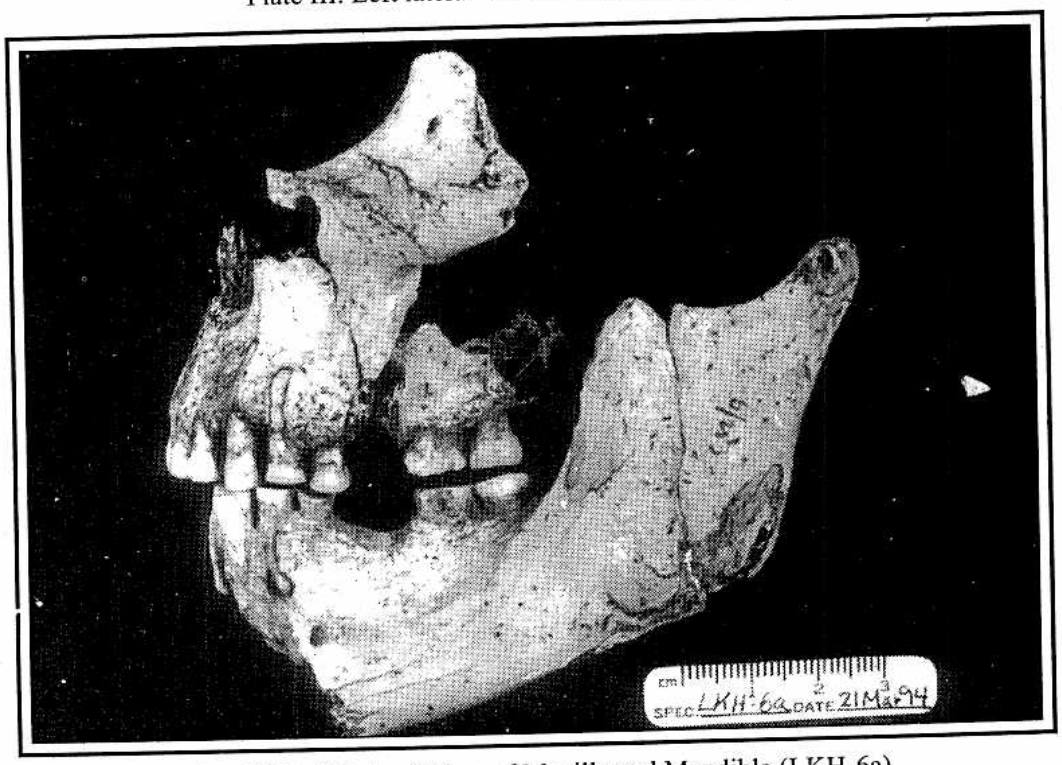

Plate IV. Left Lateral View of Maxilla and Mandible (LKH-6a)

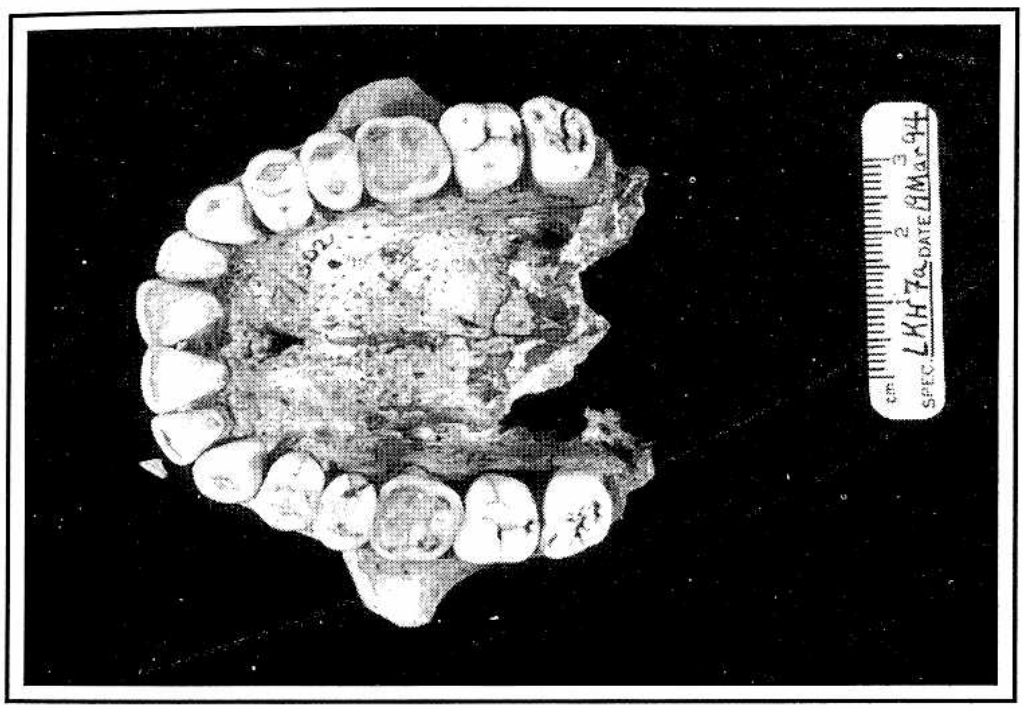

Plate V. Occlusal View of Maxillary dental Arcade (LKH-7a)

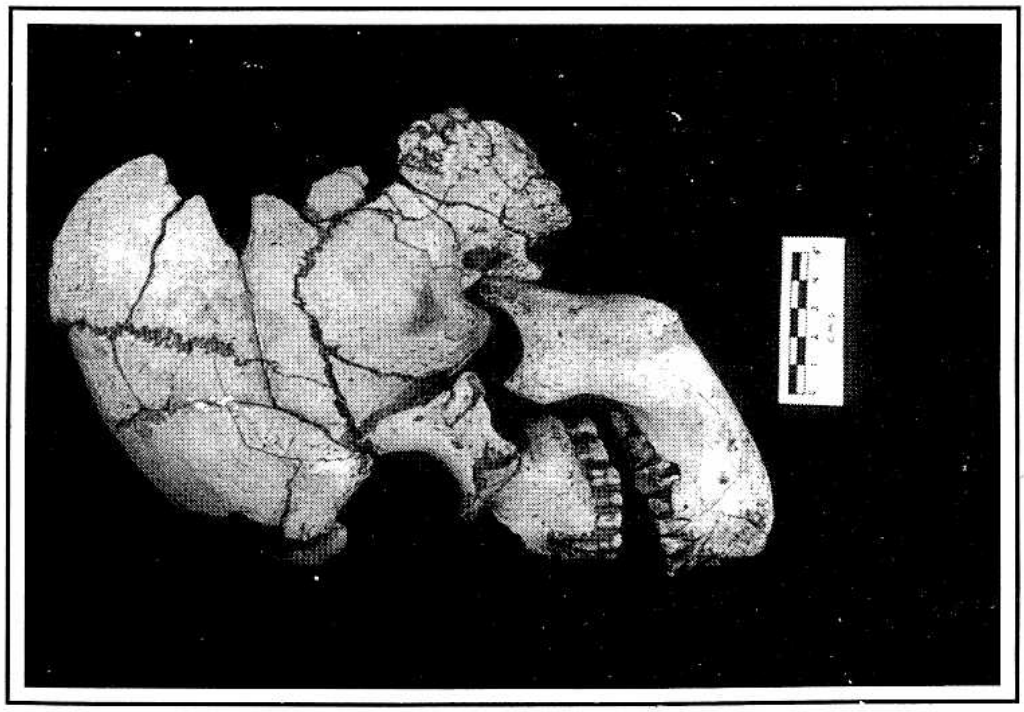

Plate VI. Left lateral View of the Skull (LKH-11)

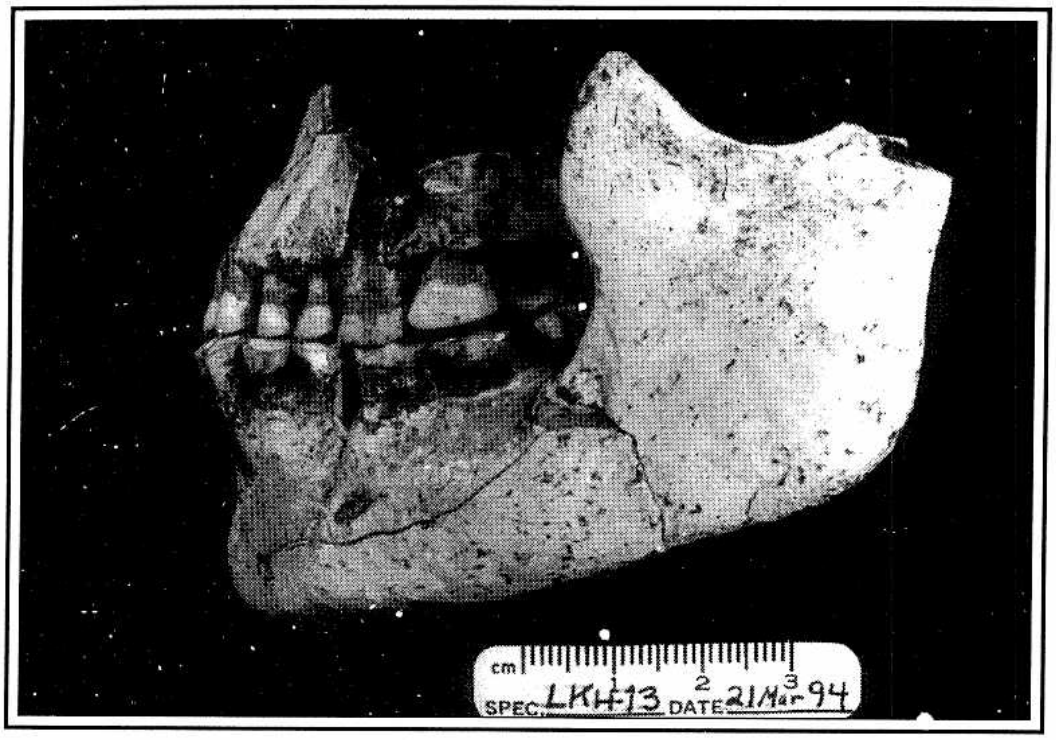

Plate VII. Left lateral view of Maxilla and Mandible (LKH-13)

tarsal elements (LKH-10, LKH-15).

Stature estimates for the Lekhahia skeletal series are presented in Table 9 and graphically in Fig. 4. Stature could be estimated for six females yielding a mean height of 161.7 centimeters. The only male for which stature could be estimated (LKH-5) resulted in a value of 177.4 cm. While the male stature estimate compares well with the mean male height at Ganga Valley sites, mean stature for Lekhahia females is much below that of plains females (Fig. 5). This observation agrees with qualitativeimpressions of skeletal robusticity between Lekhahia and Mesolithic sites in the plains. The degree of robusticity among males is comparable, however, Lekhahia females appear to display somewhat greater degree of gracility than the plains females. This could be due to the presence of older females with arthritis at LKH, a less demanding and stressful lifestyle in the hills, or to differences in the cultural treatment of women.

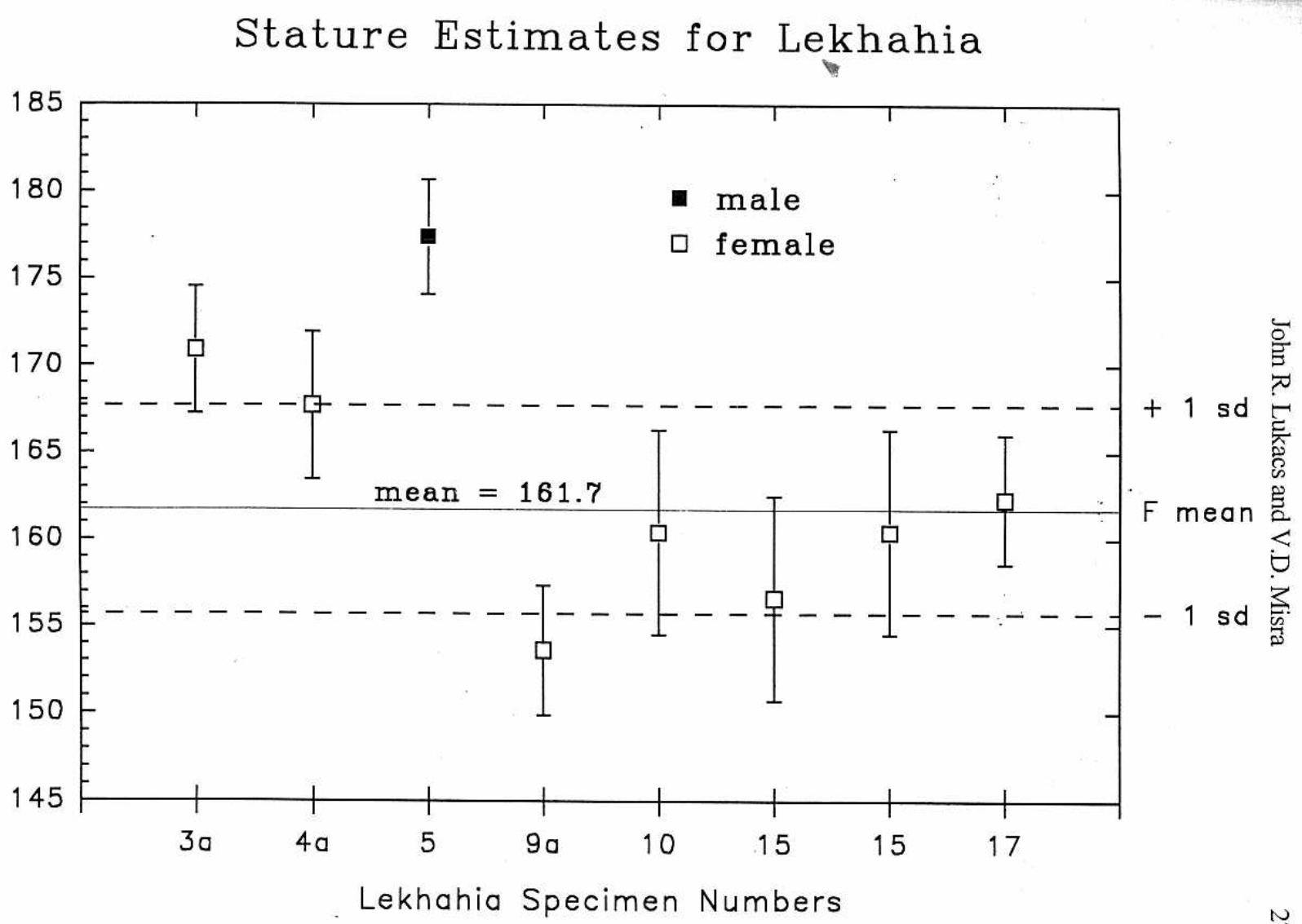
Stature Estimates for Lekhahia
185
180
175
170
165
160
155
150
145
male
female
mean = 161.7
+ 1 sd
F mean
- 1 sd
3a
4a
5
9a
10
15
15
17
Lekhahia Specimen Numbers

Fig. 4

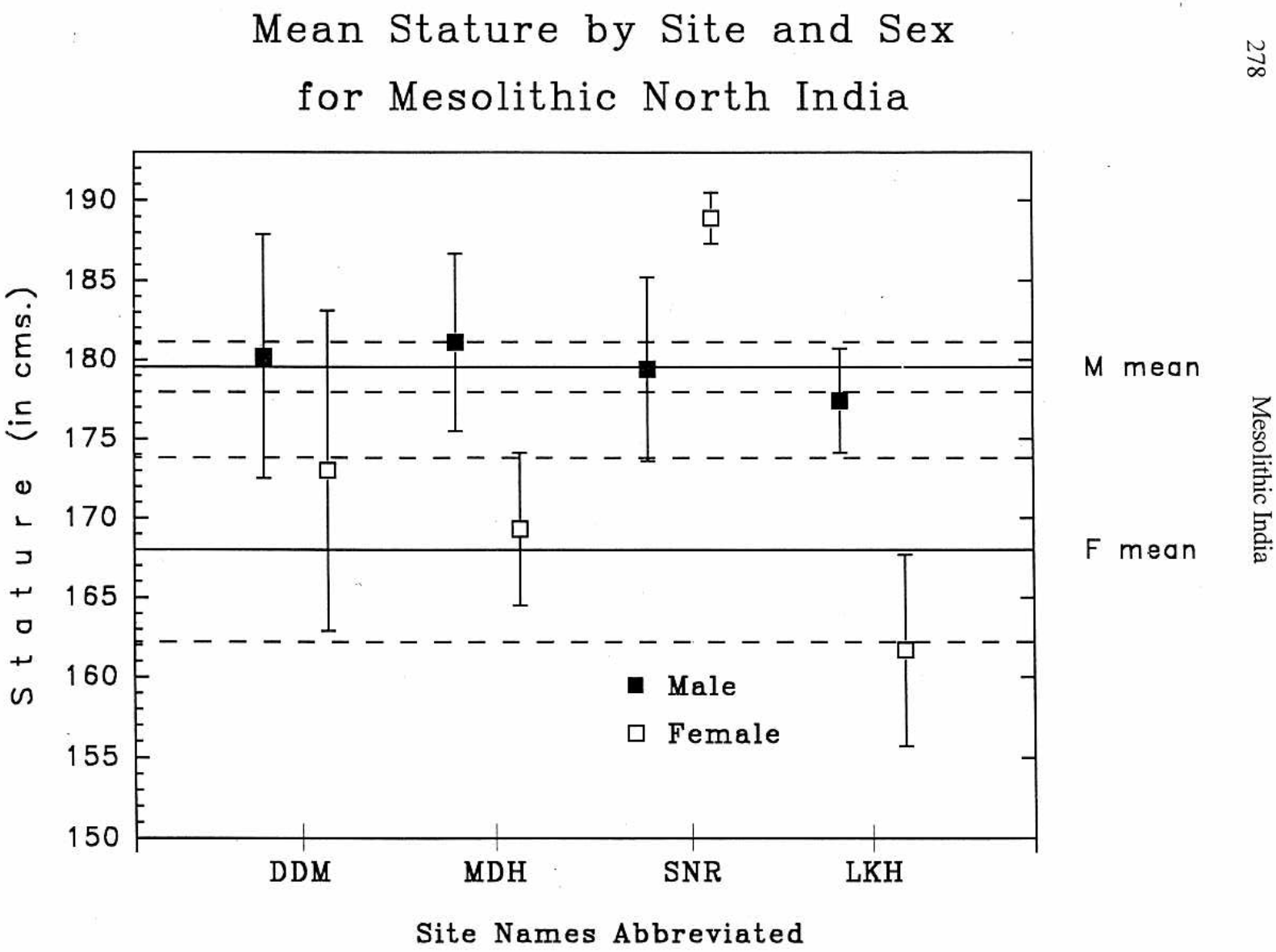
Mean Stature by Site and Sex
for Mesolithic North India
Stature (in cms.)
190
185
180
175
170
165
160
155
150
M mean
F mean
Male
Female
DDM
MDH
SNR
LKH
Site Names Abbreviated

Fig. 5

Table 4. Osteological Evaluation of Human Skeletons from Lekhahia[1]				
Specimen Number	Sex	Age	Dental Remains	Notable Skeletal and Dental Features
1a	F	18-22	Mx/Md	Dental abscess
1b	?	Adult	Mx	Interproximal Grooves
2	F	18-25	none	none
3a	F	20-25	Mx/Md	Bony spine (R tibial head)
4a	F	45-55	Mx/Md	Parry Fracture (L ulna); Degenerative Joint Disease (R elbow); TMJ dysfunction
4b	M	Adult	none	None
None	M	45-55	Md	
6a	F	30-40	Mx/Md	Antemortem tooth loss; Dental; abscess; Pulp Exposure
6b	M	50-60	Mx/Md	Antermortem tooth loss; Dental abscess; Interproximal Groove; Frontal trauma
6c	?	35-45	Mx	none
7a	M	20-25	Mx/Md	Double mental foramen
7b	F	Adult	RM[2]	None
8	M	35-45	Mx	Mid – shaft fracture (L femur); Hypercementosis
9a	F	20-30	Mx/Md	Cut-marks; Thick cortical bone (L humerus)
9b	M	Adult	none	none
10a	F	20-25	Mx/Md	none
10b	?	Adult	Md	Dental abscess
11	M	45-55	Mx/Md	Mid-shaft facture (R Humerus); Palatine spines; Mylohyoid bridge (R); Cut-marks; Dental abscess; Alveolar resorption
12	n/a	n/a	n/a	Speciman not available for study
13	F	35-45	Mx/Md	Osteophytosis (pedal phalanx); Dental abscess; Pulp exposure
14a	M	Adult	none	none
14b	?	Juvenile	none	Ulna (R)
14c	?	Neonate	none	femur (R)
15a	M	Adult	Mx	Osteolytic lesion of patella (L); Hypertrophy of soleal line (crested); Cut-marks
15b	F	Adult	none	none
16a	M	12-15	Md	Thick tympanic; Enamel hypoplasia
16a	?	4-5	Rm_1	LM^1 crown calcification complete
17	F	14-16	none	Cut-marks; large olecranon perforation

1. Based on laboratory observations made in March 1994 by Lukacs.

Table 5. Mean Scott Wear Scores for Molar Teeth												
Tooth	Ganges Plains						Kaimur Hills					
	DDM – Male			MDH - Male			LKH – Male			LKH – Female		
	n	$\bar{x}$	sd	n	$\bar{x}$	sd	n	$\bar{x}$	sd	n	$\bar{x}$	Sd
UM1	17	28.4	7.5	5	30.2	7.1	3	34.0	6.9	5	33.2	3.1
UM2	15	19.5	7.6	4	18.0	7.2	4	24.6	9.5	3	23.2	4.5
UM3	15	13.3	7.7	5	15.4	11.6	3	13.0	11.4	3	16.7	11.7
MX	13	56.6	19.5	4	56.5	17.1	3	68.5	25.1	2	64.3	11.7
LM1	18	28.6	7.7	6	26.7	4.4	3	33.7	8.4	3	31.0	3.0
LM2	15	20.5	6.8	7	21.5	8.9	1	34.0	--	2	21.5	3.5
LM3	16	16.3	8.0	5	11.8	5.5	2	20.5	19.1	4	16.5	10.5
MD	14	65.9	22.3	5	57.5	14.6	0	--	--	2	61.5	12.0
Total	9	114.8	28.6	2	120.5	53.7	0	--	--	2	125.8	23.7

Table 6. Summary of Dental Pathology at Lekhahia

Specimen Number	Sex	Age	LEH	Pulp Exposure	Calculus	Caries	Abscesses	Alveolar Recession	Antemortem Tooth Loss	Toth Count (U/L)
1a	F	18-22	0	0	0	0	+	+	0	5 / 15
3a	F	20-22	0	0	+	0	0	+	0	9 / 15
4a	F	45-55	0	0	+	0	0	+	0	8 / 16
5	M	45-55	+	0	+	0	+	+	0	0 / 12
6a	F	30-40	0	+	+	+	+	+	+	14 / 6
6b	M	50-60	0	0	+	0	+	+	+	6 / 2
6c	?	35-45	0	0	+	0	0	+	0	4 / 0
7a	M	20-25	+	0	+	0	0	+	0	16 / 7
8	M	35-45	0	0	+	0	--	--	0	5 / 0
9a	F	20-30	+	0	+	0	0	+	0	13 / 7
10a	F	20-25	0	0	+	0	0	+	0	1 / 5
11	M	45-55	0	0	+	0	+	+	0	11 / 12
13	F	35-45	+	+	+	0	+	+	0	14 / 15
15a	M	Adult	0	0	0	0	0	+	+	2 / 0
16a	M	12-15	+	0	+	0	0	+	0	0 / 4
count			6/15	2/15	13/15	1/15	6/15	14/14	3/15	108 / 106
freq.			0.40	0.13	0.87	0.06	0.40	1.0	0.20	214

Table 7. Prevalence of Dental Lesions
(individual count, sexes pooled)

	LKH			DDM			MDH		
	+	n	%	+	n	%	+	n	%
Alveolar Resorption	14	14	100.0	27	33	81.8	10	15	66.7
Calculus	13	15	87.0	30	35	85.7	9	12	75.0
Abscesses	6	15	40.0	9	35	25.7	3	15	20.0
Hypoplasia	6	15	40.0	30	32	93.8	7	11	63.6
AMTL	3	15	20.0	10	35	28.6	4	15	26.7
Pulp Exposure	2	15	13.0	11	35	31.4	3	14	21.4
Caries	1	15	6.0	5	35	14.3	4	14	28.6