PLATES
List of Plates:

Plate I
A: Section of Trench CRD XI (facing north): Chirand (after Verma, 2007)
B: Remains of Animal Burials, Period IIB: Chirand (after Verma, 2007)
C: Ceramics (dish-cum-bowls) from Period IIB: Chirand (after Verma, 2007)

II
A-D: Iron Objects, 1-29: Chirand (after Verma, 2007)

III
A-D: 30-55: Chirand (after Verma, 2007)

IV
Iron Objects: Chirand (courtesy: Patna Museum)

V
Iron Objects: Chirand (courtesy: Patna Museum)

VI
Iron Objects: Chirand (courtesy: Patna Museum)

VII
Iron Objects: Chirand (courtesy: Patna Museum)

VIII
A: Manjhi Mound
B: Iron and Terracotta Objects from Period II: Maner (after IAR 1984-85)

IX
A: BRW: Panr/ Panda (after Choudhary, 2010)
B: Iron Objects: Panr/ Panda (after Choudhary, 2010)
C: Bone Tools: Panr/ Panda (after Choudhary, 2010)

X-XII
Iron Objects: Panr/ Panda (Courtesy: K.P. Jayaswal Research Institute, Patna)

XIII
A: Wooden Base for Mauryan Pillar in Trench TF, Tomb Area: Kumrahar (after Altekar and Mishra, 1959)
B: KR IIA, Showing Apsidal Structure, Section Looking West: Kumrahar (after Altekar and Mishra, 1959)
C: KR IV Showing a Wing of Monastery of Period III: Kumrahar (after Altekar and Mishra, 1959)
D: Pottery Drawing: Kumrahar (after Altekar and Mishra, 1959)
E: Pottery Drawing: Kumrahar (after Altekar and Mishra, 1959)

XIV
Iron Objects (drawing): Kumrahar (after Altekar and Mishra, 1959)

XV
A: General View of the Stupa Showing Four Enlargements: Vaisali (Sinha and Roy, 1969)
B: VSK IIB, Concrete Floor Showing Post Holes: Vaisali (Sinha and Roy, 1969)
C: VSK IV, Ring Wells of the Pre-Tank Period: Vaisali (Sinha and Roy, 1969)
D: NBPW and Black Ware (drawing) from Period II: Vaisali (Sinha and Roy, 1969)

XVI
A-C: Iron Objects, Vaisali (Sinha and Roy, 1969)

XVII
A: Iron Objects from Period II: Oriup (after IAR, 1966-67)
B: Iron Objects: Champa (after IAR, 1982-83)

XVIII  
A: General View of the Mound of Senuwar (after Singh, 2003)  
B: Excavated Section of Senuwar Looking East (after Singh, 2003)  
C: Pottery Drawing [NBPW and Black Slipped Ware (henceforth BSW)] from Period III: Senuwar (after Singh, 2003)  
D: Pottery Drawing (BRW and Red Ware) from Period III: Senuwar (after Singh, 2003)  
E. Pottery Drawing (red ware) from Period III: Senuwar (after Singh, 2003)

XIX  

XX  

XXI  
A-B: Plain and Painted BRW from Taradih

XXII  
A: Jarasandh ka Akhara (dual ground): Rajgir (after Mani)  
B: Cyclopean Wall near Southern Gateway (Old Rajgir) (after Mani)  
C: General View of the Excavated Trenches at Rajgir, (after IAR 1953-54)  
D: Occupational Deposits below the Southern Defences: Rajgir (after IAR, 1962-63)

XXIII  
A: Bastion with Battered Brick Platform: Rajgir (after IAR 1961-62)  
B: A Pre-rampart Habitational Deposit: Rajgir (after IAR 1961-62)  
C: Punch Marked Coins from Pre-rampart Deposits: Rajgir (after IAR 1961-62)  
D: Steatite Plaque from Period I: Rajgir (after IAR 1962-63)  
E: Occurrence of Pottery at Maniyar Math: Rajgir (after Kuraishi, 1950)  
F: Terracotta Objects and Figurines: Rajgir (after kuraishi 1950)

XXIV  
A: General View of the Mound: Juafardih (after Mani)  
B: Laying Out of Trenches: Juafardih (after Mani)  
C: Iron Objects: Juafardih (after Mani)  
D: NBPW: Juafardih (after Mani)

XXV  
A: Section Facing East, A 4 x IV: Ghorakatora (after Mani)  
B: Brick Wall with Storage Jars, B 2 x I: Ghorakatora (after Mani)  
C: Ring Well Exposed on Section: Ghorakatora (after Mani)  
D-E: Ceramics: Ghorakatora (after Mani)  
F: Iron Objects: Ghorakatora (after Mani)

XXVI  
A: General View of the Mound, Saradkel (after IAR, 1964-65)  
B-C: Iron Objects, Saradkel (after IAR, 1964-65)

XXVII:  
A: Iron Object, Hatigra (after Chattopadhyay and Sengupta, 2011)  
B: BHR I, Section Facing South: Bahiri (after Chakrabarti and Hasan, 1982)  
C: BHR III, Section Facing East: Bahiri (after Chakrabarti and Hasan, 1982)  
D: Pottery Drawing (BRW): Bahiri (after Chakrabarti and Hasan, 1982)  
E: Pottery Drawing (black ware): Bahiri (after Chakrabarti and Hasan, 1982)  
F: Pottery Drawing (red ware): Bahiri (after Chakrabarti and Hasan, 1982)
B: Painted Ware (drawing): Bahiri (after Chakrabarti and Hasan, 1982)
C: Painted Ware (drawing): Bahiri (after Chakrabarti and Hasan, 1982)
D: Worked Bones (drawing): Bahiri (after Chakrabarti and Hasan, 1982)

XXIX: A: BRW: Banesvaradanga (after Chattopadhyaya et. al. 2005)
B: Skeleton: Banesvaradanga (after Chattopadhyaya et. al. 2005)
C: Dish on Stand: Banesvaradanga (after Karchauduri 2007)
D: Burial Pot: Banesvaradanga (after Chattopadhyaya et. al. 2005)

XXX A: Pottery Drawing (red wash ware), Period III: Banesvaradanga (after Mukherji, 1993-94)
B: Pottery Drawing (BRW), Period III: Banesvaradanga (after Mukherji, 1993-94)
C: Pottery Drawing (black polished ware and grey ware), Period III and IV: Banesvaradanga (after Mukherji, 1993-94)
D i) Section of the Trench, BND II; ii) Port Lobs on floor, BND II; iii) Brick Structures and Sections, BND II: Banesvaradanga (after Mukherji, 1993-94)
E. i) Tumbler in BRW; ii) Small Vase of Dirty Buff Ware: Banesvaradanga (after Mukherji, 1993-94)
F i) Iron Objects; ii) Terracotta Beads: Banesvaradanga (after Mukherji, 1993-94)

XXXI  A: Excavated Trenches of Pandurajar Dhibi (after Dasgupta, 1964)
B: Burials: Pandurajar Dhibi (after Dasgupta, 1964)
C: A Row of Six Elliptical Ovens, Period III: Pandurajar Dhibi (after IAR, 1964-65)

XXXII: A: Iron Object: Pandurajar Dhibi (after Dasgupta 1964)
B: Iron Objects: Pandurajar Dhibi (after Bandyopadhyay 2006)
C: Metal Objects: Pandurajar Dhibi (Courtesy: State Archaeological Museum, Government of West Bengal.

XXXIII A: A Dish Shaped Object of Iron, Period II: Pandurajar Dhibi (after De and Chattopadhyay, 1989)
B: Sickle of Iron, Period III: Pandurajar Dhibi (after De and Chattopadhyay, 1989)
C: Bone Tools: Pandurajar Dhibi (after Dasgupta 1964)

XXXIVA: Channel Spouted Bowl of BRW: Pandurajar Dhibi
B: BRW Potteries: Pandurajar Dhibi (after Dasgupta, 1964)
C: Painted Sherds of BRW: Pandurajar Dhibi (after Dasgupta, 1964)

XXXV  A: General View of the Mound of Mangalkote (courtesy: Department of Archaeology, University of Calcutta)
B: Chalcolithic Floors with the Evidence of Ovens: Mangalkote (after Ray and Mukherjee, 1992)
C: Iron Objects: Mangalkote (Ray and Mukherjee, 1992)
D: BRW Sherds from Mangalkote (courtesy: Department of Archaeology, University of Calcutta)

XXXVI Drawing of Iron Objects: Mangalkote (courtesy: Department of Archaeology, University of Calcutta)

XXXVII A: The Mound of Mandira
   B: The Mound of Chella Kamarpata
   C: Occurrence of Ores/ Slags at the Mounds of Kamarpata
   D: Occurrence of Slags at the Mounds Near Daranda

XXXVIII A: The Exposed Stupa: Bharatpur (after IAR, 1971-72)
   B: Iron Objects from Bharatpur (Courtesy: Museum and Art Gallery at Rajbati, University of Burdwan)
   C: Bone Object: Bharatpur (Courtesy: Museum and Art Gallery at Rajbati, University of Burdwan)
   D: Iron Slags: Bharatpur (Courtesy: Museum and Art Gallery at Rajbati, University of Burdwan)
   E: Copper Objects: Bharatpur (Courtesy: Museum and Art Gallery at Rajbati, University of Burdwan)
   F: Bone Tools: Bharatpur (Courtesy: Museum and Art Gallery at Rajbati, University of Burdwan)

XXXIX: A: Ring Wells at the Cliff Section of the River Damodar (after IAR 1996-97)
   B: Evidence of Iron Working at the Bhairavdana Mound of Pakkanna (Courtesy: Department of Archaeology, University of Calcutta)
   C: Painted Potsherds from Pakkanna (after IAR 1996-97)
   D: Stamped Terracotta Figurine: Pakkanna (after IAR 1996-97)

XL A: Remains of Floor and Post-holes at Bhairavdana Mound: Pakkanna
   B: Ring Well, Pakkanna (after IAR 1999-2000)
   C: Rouletted Ware, Pakkanna
   D: Red Reserved Ware from Pakkanna
   E-F: Iron Objects from Pakkanna (Courtesy: Department of Archaeology, University of Calcutta)

XLI: Iron Objects from PKN 1 (Courtesy: Department of Archaeology, University of Calcutta)

XLII: Iron Objects from PKN 2 (Courtesy: Department of Archaeology, University of Calcutta)

XLIII A: Iron Objects from PKN 2 (Courtesy: Department of Archaeology, University of Calcutta)
   B: Iron Objects from PKN 3 (Courtesy: Department of Archaeology, University of Calcutta)

XLIV A: General View of the Mound of Dihar (after Chattopadhyay et al., 2010)
   B: Western Section of the Hirapur Mound: Dihar (after Chattopadhyay et al., 2010)
XLV A: BRW Tumblers: Dihar (after Chattopadhyay et al., 2010)
B: BRW Potsherd: Dihar (after Chattopadhyay et al., 2010)
C: Broken Fragment of a Spindle Whorl: Dihar (after Chattopadhyay et al., 2010)
D: Cut Bones: Dihar (after Chattopadhyay et al., 2010)

XLVI A: Working Floor with an Outline of Burned Clay, Possibly the Remains of a Hearth: Manasatala Mound, Dihar (after Chattopadhyay et al., 2010)
B: Iron Slag, Manasatala Mound: Dihar ( Courtesy: Department of Archaeology, University of Calcutta)
C: Pigments, Manasatala Mound: Dihar (Courtesy: Department of Archaeology, University of Calcutta)

XLVII Metal Objects: Dihar (after Chattopadhyay et al., 2010)

XLVIII A: Beads of Semi-precious Stones: Dihar (after Chattopadhyay et al., 2010)
B-C: Terracotta Figurines: Dihar (after Chattopadhyay et al., 2010)
D: Antlers: Dihar (after Chattopadhyay et al., 2010)

XLIX A: Iron Slags/ Ores at Pachera
B: The Mound of Churulia
C-D: Slags at Churulia

L A: The Mound of Tulsipur
B: The Occurrence of Iron Slags, BRW at Tulsipur
C: Ceramics (drawing) from Tulsipur (after Chattopadhyay, 2010)
D: General View of the Bhairabbanki Valley
E: Occurrence of Iron Slags and Microliths in the Bhairabbanki Valley

LI A: The Site of Chandraketugarh
B: Kunda: Chandraketugarh
C: Ceramics: Chandraketugarh
D: Crucible: Chandraketugarh (Chattopadhyay, 2004)

LII A: General View of the Mound of Bangarh
B: Iron Objects: Bangarh (Goswami, 1948)
C: Awls and Collyrium Sticks of Copper: Bangarh (Goswami, 1948)
D: Ceramics: Bangarh (Goswami, 1948)
E: Potsherds with Various Decorative Designs: Bangarh (Goswami, 1948)

B: Bone Tools: Golabai Sasan (after IAR 1991-92)
C: Polished Bone Tools: Golabai Sasan (after IAR 1991-92)
D-E: Iron Celt: Golabai Sasan

LIV A: Map Showing the Excavated and Explored Sites along the Mahanadi Basin (after Behera and Chattopadhyay, 2013)
B: Ceramics (drawing) from Period III; 1-5: BRW, 6 and 7: BSW, 8-14: Red Slipped Ware (RSW), 15-20: Red Ware (RW): Khameswaripali (after Behera, 2002)


B: Ceramics (drawing) from Period II; 1-4: BRW, 5-8: BSW, 9-11: RSW and plain red ware: Kumersingha (after Behera, 2003)

C: General View of the Mound Kurumpadar (Yule ed., 2006)

LVI A: Ceramics (drawing) from Period II; 1-3: BRW, 4-6: BSW, 7-10: RSW and 11-13: plain red ware: Kurumpadar (after Behera, 2003)

B: Ceramics (drawing) from Period III; 1-3: BRW, 4-5: BSW, 6-9: RSW and 10-11: plain red ware: Kurumpadar (after Behera, 2003)


B: Explored Ceramics (RSW): Kurumpadar (after Yule ed., 2006)

C: Cord Impressed Potteries (drawing) from Hikudi (after Behera, 2006)

D: General View of the Site of Haldipali (after Yule ed., 2006)

LVIII A: The Pillars at Sisupalgarh

B: The Western Gateway: Sisupalgarh

C: Sisupalgarh, GPS-assisted Plan of the Early Historic Ruined Fortress (after Yule ed., 2006)

D: Sisupalgarh, Isometric Reconstruction of the Northern Gate Type of the Western Rampart (SP IV) (after Yule ed., 2006)

LIX A: Western Gateway, Later Wall Supporting Part of the Southern Flank: Sisupalgarh (after Lal, 1949)

B: Western Gateway, Steps Leading to the Top of the Southern Gateway-flank: Sisupalgarh (after Lal, 1949)

C: Western Side of Circular Pillar Arrangement, View to East: Sisupalgarh (after Mohanty and Smith, 2008)

D: Room PL11 in Large Rectilinear Structure Adjacent to Pillars: Sisupalgarh (after Mohanty and Smith, 2008)

E: Rectilinear Structure on Western Portion of the Pillar Mound: Sisupalgarh (after Mohanty and Smith, 2008)

LX A-C: Ceramics (drawing): Sisupalgarh (after Lal, 1949)

D: Decorated Potsherds: Sisupalgarh (after Lal, 1949)
E-F: Incised, Stamped Potteries and Knobbed Ware: Sisupalgarh (after Lal, 1949).

LXI  A: Decorated Potsherds: Sisupalgarh (after Lal, 1949)
B: Iron Implements (drawing): Sisupalgarh (after Lal, 1949)
E: Terracotta Ear Ornaments: Sisupalgarh (after Lal, 1949)

LXII A: Map Showing Early Historic Garh Sites of Orissa (after Yule ed., 2006)
B: Plan of Jaugada Fortress (after Yule ed., 2006)
C: Plan of Kharligarh Fortress (after Yule ed., 2006)
D: Drawings of Iron Objects Found from Kharligarh (after Dash, 2008)

B: Flanking Remains of Moat Visible Outside the North-eastern Defence Wall: Badmal (after Behera and Chattopadhyay, 2013)
C: Trench-I, Showing Habitational Layers: Badmal (after Behera and Chattopadhyay, 2013)
D: Sherds of BRW with Graffiti Marks from the So-called ‘Iron Age’: Badmal (after Behera and Chattopadhyay, 2013)

LXIV A: Iron Objects from the Early Historic Period: Badmal (after Behera and Chattopadhyay, 2013)
B: Finished Beads of Carnelian and Crystal Quartz from Trench-III: Badmal (after Behera and Chattopadhyay, 2013)
C: Bead Blanks of Agate from Trench-III: Badmal (after Behera and Chattopadhyay, 2013)
D: Bead Roughouts and Wastes of Banded-hematite-red-jasper from Trench-III: Badmal (after Behera and Chattopadhyay, 2013)

LXV A: General View of the Mound of Narla Asurgarh (after Yule ed., 2006)
B: Plan of Fortress of Narla Asurgarh (after Yule ed. 2006)
C: Ceramics (drawing) with Graffiti Marks: Narla Asurgarh (after Mohanty and Mishra, 2002)
D: Beads: Narla Asurgarh (after Mohanty and Mishra, 2002)

LXVI A: Asurgarh near Manamunda, GPS-assisted Site Plan (after Yule ed. 2006)
B: Knobbed Lids (drawing): Nuagarh Asurgarh (after Pradhan, 2006)
C: Graffiti Marks on Ceramics (drawing), A: RSW, B: BSW and C: BRW: Nuagarh Asurgarh (Pradhan, 2006)
D: Red Slipped Ware (RSW) (drawing): Nuagarh Asurgarh (after Pradhan, 2006)
E: BSW (drawing): Nuagarh Asurgarh (after Pradhan, 2006)

LXVII A: The Plan of Budigarh (after Yule ed., 2006)
B: Plain Red Ware (drawing): Budigarh (after Yule ed., 2006)
C: Black Ware, Copper and Iron Objects (drawing): Budigarh (after Yule ed., 2006)
D: Knobbed Ware (1-2) and NBPW in Different Colours (3-5): Budhigarh (after Yule ed. 2006)
E: Iron Spearhead (after Mohanty and Mishra, 2002)
LXVIII A: Painted Potsherd: Budigarh (after Mohanty and Mishra 2002)
B: Red Jasper Seal: Budigarh (after Mohanty and Mishra, 2002)
C: Designed and Stamped Potsherds of Red Ware and RSW: Tel valley (after Mishra, 2011)
D: Copper and Bronze Artefacts: Nehena (after Mishra, 2011)
B: Sandohel near Khariar, Iron Age Tombs towards the North (after Yule ed. 2006)
C: Sandohel near Khariar, Plan and Profile of Iron Age Tomb (after Yule ed. 2006).
LXX A: Iron Working Activities by the Agarias of Central India (after Ball, 1880)
B: Agaria Woman Making Nari Tuyere (after Elwin, 1942)
C: Agaria Smithy at Jobhipath (after Elwin, 1942)
D: Agaria Furnace at Dumarkachhar in the Bilaspur District (after Elwin, 1942)
LXXI A: An Asur Woman Operating the Foot Bellows during the Time of Iron Smelting (after Leuva, 1963)
B: Apparatus Used by the Asurs for Their Iron Smelting Process (after Leuva, 1963)
C: Birjhia Asur Furnaces at Kerakhair (after Elwin, 1942)
D: Bir Asur Furnace at Doka (after Elwin, 1942)
LXXII A: Furnace in the Bhagalpur District (after Montgomery Martin, 1838)
B: Iron Smelting Procedures as Practiced in the Santhal Parganas (after Watson 1907)
C: Bird’s Eye View of Furnace and Bellows (after Watson 1907)
D: Front Elevation of the Furnace at Kunkerai, Orissa (after Percy, 1864)
E: Side Elevation of the Furnace at Kunkerai, Orissa (after Percy, 1864)
F: Plan of the Furnace at Kunkerai, Orissa (after Percy, 1864)
G: Vertical Section through the Centre and One of the Bellows, Kunkerai, Orissa (after Percy, 1864)
H: Vertical Section of One of the Bellows at Kunkerai, Orissa (Percy, 1864).
I: Section of One of the Bellows Showing Action of the Heel, Kunkerai, Orissa (after Percy, 1864)
LXXIII A: Plan and Elevation of the Furnace of Kamarjoda (after Ghosh, 1964)
B: Plan and Elevation of the Furnace of Chinglebecha (after Ghosh, 1964)
C: Side and Front Elevation of the Furnace of Jiragora (after Ghosh, 1964)
LXXIV A: Refining Activities Performed at the Site of Deocha (after Ball, 1877)
B: Forging Activities Performed at the Site of Deocha (after Ball, 1877)
LXXV  A: Gun-making in Monghyr (after Watson 1907)  
B: A Cutler’s (Kamar) Shop at Burdwan, Showing Grinding Wheel and Method of Driving This (after Watson, 1907).  
C: Open-air Forge at Jam Tola, near Netarhat (after Elwin, 1942)  
D: Stages of Making of an Arrowhead (after Elwin, 1942)  
E: The Tools Used in Sheet-metal Work, for Making a Ghara (after Watson, 1907)  
F: Hydraulic Mining for Iron Sand, Khasi Hills (after Ball, 1881b)

LXXVI A: The Remains of a Furnace: Ballia- Narayanpur  
B: Remains of Burnt Bricks Having a Coating of Smelted Materials: Ballia Narayanpur  
C: Remains of a Fallen Furnace: Ballia-Narayanpur  
D: The Site of Deocha

LXXVII A-B: Remains of Burnt Bricks with a Coating of Smelted Materials: Deocha

LXXVIII A: Slag: Ganpur  
B: The mound of Jatadharitala at Damra  
C: Iron Working Evidence: Damra

LXXIX: A: Iron Slags Recorded at Lohagram  
B: Remains of Burnt Bricks, Iron Slags: Jashpur  
C: The Occurrence of Iron Ore: Ambikanagar  
D: Iron Stone Occurrence near Kankardanga  
E: Tuyer at Domahani, Patharghata

LXXX and LXXXI: Iron Smelting Activities of the Birjhia-Asuras at Bishunpur

LXXXII A: The Western Section Facing towards East: Trench ZB1: Dihar (2012-13)  
(Courtesy: Department of Archaeology, University of Calcutta)  
B: The Southern Section Facing towards North: Trench A1: Dihar (2012-13)(Courtesy: Department of Archaeology, University of Calcutta)  
C: In situ Occurrence of Metal Working Activities: A1: Dihar (2012-13)  
(Courtesy: Department of Archaeology, University of Calcutta)  
D: Sherds of Three Different Types of Tumblers: BRW: Dihar (2012-13)  
(Courtesy: Department of Archaeology, University of Calcutta)

LXXXIII A: A Broken Piece of Miniature Bowl: Black Ware: Dihar (2012-13)  
(Courtesy: Department of Archaeology, University of Calcutta)  
B: Sherds of Painted BRW: Dihar (2012-13) (Courtesy: Department of Archaeology, University of Calcutta)  
C: Four-Headed Worked Bone (arrowhead): Dihar (2012-13) (Courtesy: Department of Archaeology, University of Calcutta)  
D: Beads of Semi-precious Stones: Dihar (2012-13) (Courtesy: Department of Archaeology, University of Calcutta)

LXXXIV: Iron Objects: Dihar (2012-13) (Courtesy: Department of Archaeology, University of Calcutta)
LXXXV: Iron Objects: Dihar (2012-13) (Courtesy: Department of Archaeology, University of Calcutta)

LXXXVI A-C: Iron Objects: Dihar (2012-13) (Courtesy: Department of Archaeology, University of Calcutta)
D: Copper Ring: Dihar (2012-13) (Courtesy: Department of Archaeology, University of Calcutta)
E: Damaged Specimen of Antimony Rod: Dihar (2012-13) (Courtesy: Department of Archaeology, University of Calcutta)
Plate XLIV

A

B

Site: Dihari
Area: Hirapur
Trench: B1
Section: Western Section
Scale: 1:200
Datum: 54.800
Depth of Cutting: 2.57 m VRS.
Bamboo piece
Wooden piece tied with a string
Wooden bowls
Pieces of cow hide with holes
Bamboo blow pipe
Earthen nozzle