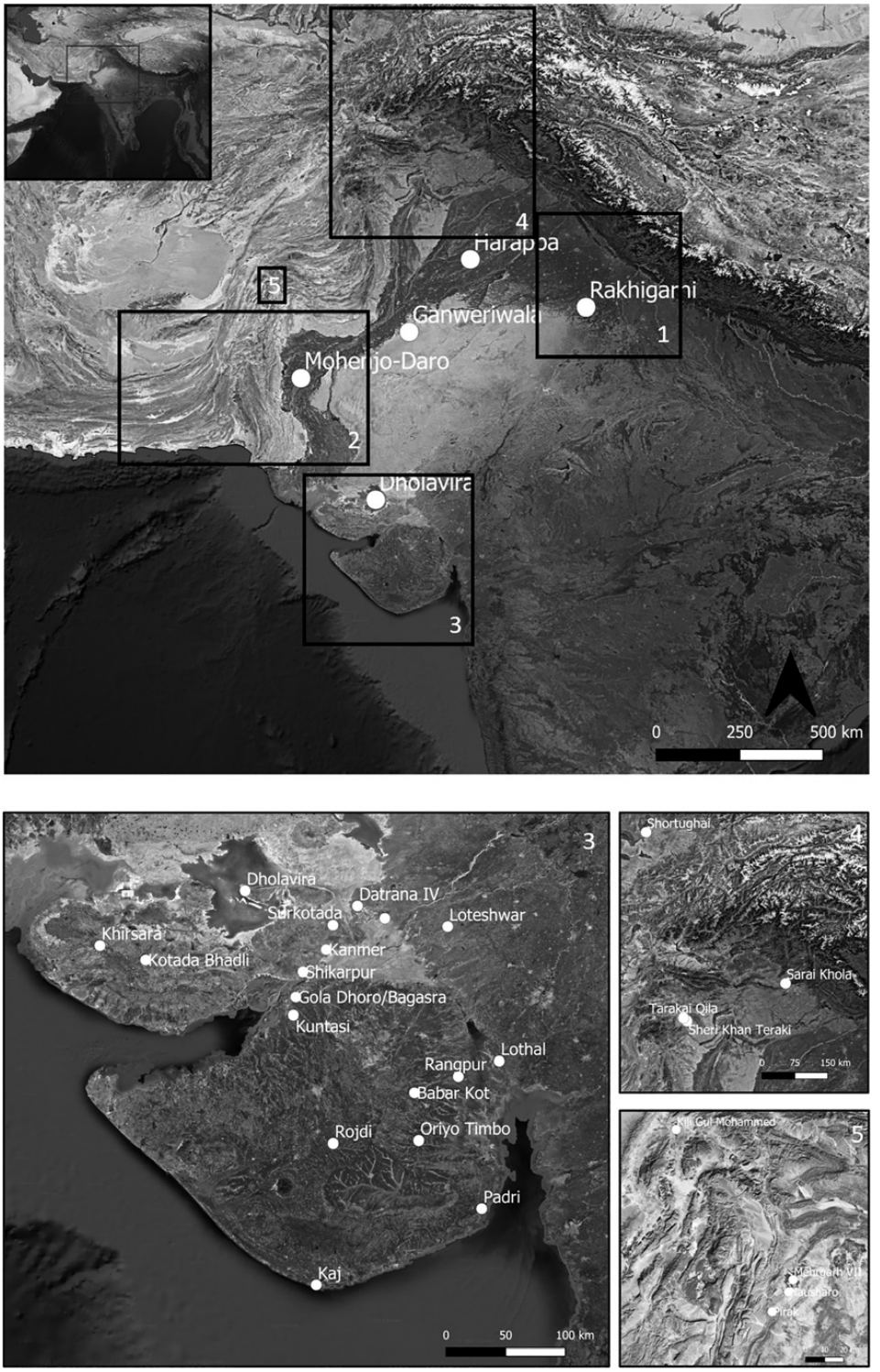
ONE

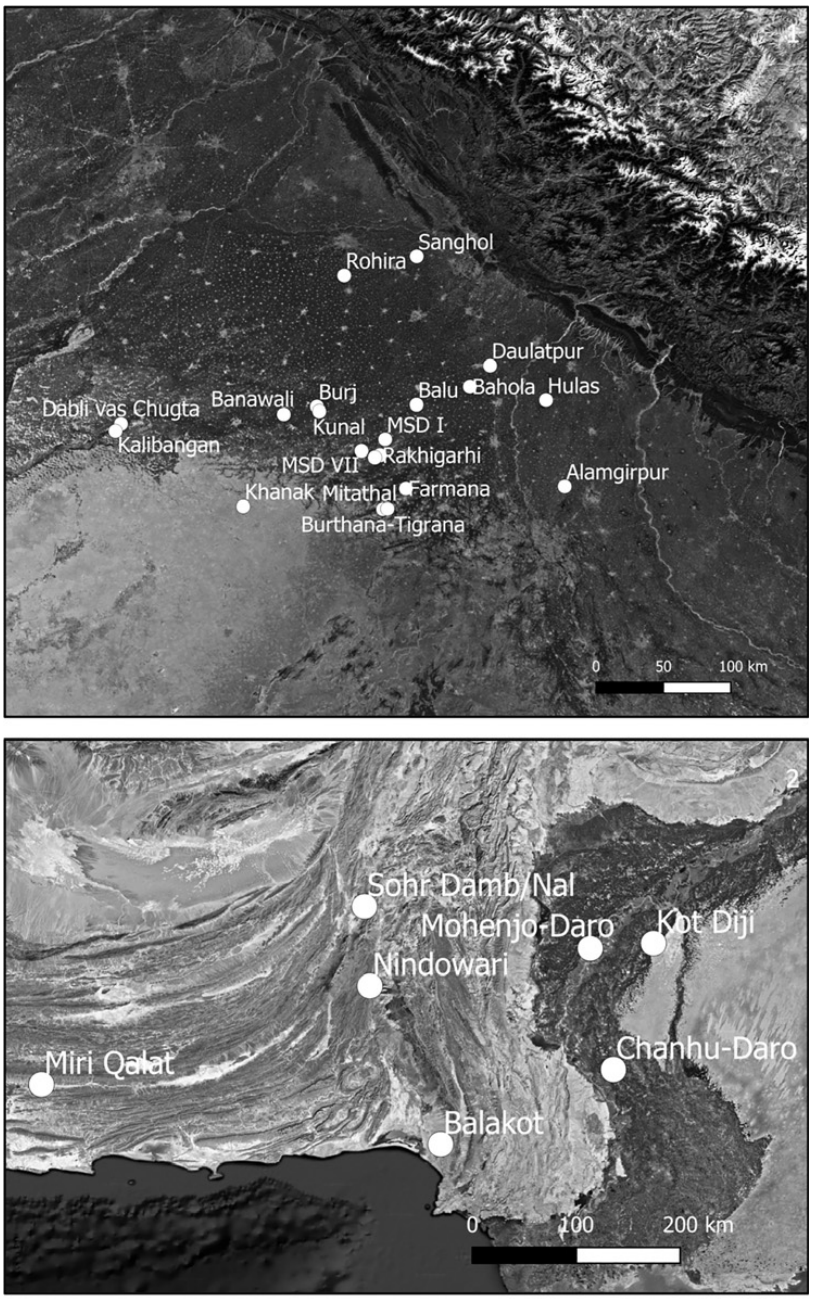
INTRODUCTION

'[G]reat cities with teaming populations like Mohenjo-Daro and Harappa could never have come into being save in a country which was capable of producing food on a big scale.'
Marshall (1931:27)

The advent of agriculture fundamentally changed humans' relationships with their floral world. The physical, social and cultural landscape changed as they became more invested in the cultivation of plants, as domestication processes progressed and as the development of agriculture set in. In the Indus Civilization of north-west South Asia *c.*3200–1500 BC, the earliest examples of large-scale agricultural systems in the subcontinent developed and agriculture has been woven into discussions of the social and cultural complexity since the earliest excavations. Often described as one of the largest Bronze Age civilizations (Childe 1950; Kenoyer 1998; Possehl 1999; Wright 2010), geographically the Indus Civilization covered an area that includes modern-day Pakistan and northern India, which might extend into Afghanistan if we include the site of Shortughai (Figure 1). As a result the Indus Civilization covered a wide range of environmental conditions, including several current eco-zones and riverine systems, and it has two distinct rainfall systems, the winter westerlies and the Indian Summer Monsoon (ISM). This has made it a prime region for exploring how changing agricultural systems intersected with the rise and fall of urban systems in complex environments.



1 Distribution of Indus sites with particular reference to those mentioned in this book. While not every site in the Indus is noted here, those with archaeobotanical materials that are referenced throughout are shown in the inserts. The five largest sites, often called cities, are also shown in the main map. It is noticeable that there are more sites in Gujarat (insert 3) and the north-east (insert 1), and as discussed in Chapter 3, this is due to the historical imbalances in archaeobotanical (and archaeological) research and modern geopolitics. It is hoped in due time this map can be redrawn with more sites in inserts 2, 4 and 5, and more inserts made, particularly around Harappa and Ganweriwala. Author's own map made in QGIS



Main map showing cities of the Indus
Inserts: 1 – Northeast region
2 – Sindh and Makran coast
3 – Gujarat
4 – North
5 – Baluchistan (specifically Bannu Basin)

1 (cont.)

Humans live in floral worlds, and the study of past plant use is a critical component of archaeology as a result. Our interactions with plants can inform us about the environment and our manipulation of that environment, our food and cultural choices, how society is structured and labour is organized, and how things change or not over time and in response to a multitude of variables. Floral data from the Indus have been used to explore such questions, with research into the agricultural strategies of the Indus farmers and the use of plants as food (e.g. Bates et al. 2017a, 2017b, 2017c; Garcia-Granero et al. 2016b, 2017a, 2017b; Petrie and Bates 2017; Petrie et al. 2016; Pokharia et al. 2014; Reddy 1997, 2003; Saraswat 1992; Vishnu-Mittre 1974; Vishnu-Mittre and Savithri 1982; Weber 1999; Weber and Fuller 2008), as fuel (e.g. Lancelotti 2010, 2018; Lancelotti and Madella 2012) and as material culture (e.g. Kenoyer 1994; Lancelotti 2010, 2018; Lancelotti and Madella 2012; Wright et al. 2012), as well as to address broader questions about the nature of social organization (e.g. Madella and Fuller 2006; Petrie et al. 2017; Weber et al. 2010a) and human-environment interactions (e.g. Farooqui et al. 2013; Madella 2003; Madella and Fuller 2006; Petrie et al. 2017; Weber et al. 2010b).

This book collates the current research for Indus archaeobotany, outlining how the field has developed and how it is moving forward. Through a deep dive into the history of Indus archaeobotany, looking at work on individual crops and at bigger themes like agricultural organization and climate change, it demonstrates how Indus peoples engaged with the plants available to them. It looks at how they thought about and utilized plants for food and building materials, and at more 'ephemeral' concepts like identity construction, but it also illustrates how much work has been done on and is being done in Indus archaeobotany. We have a rich archaeobotanical record and a blossoming understanding of floral lives in the Indus Civilization, and this book brings these together in one place and displays our archaeobotanical breadth of knowledge for those who have been sceptical of what the Indus record can show, but it also reminds people that Indus archaeobotany should be included in broader discussions of Old World Bronze Age archaeobotany, archaeobotanical theory and method.

AN ASSUMED LACUNA OF DATA

This book shows the richness of the Indus record, and the many authors cited in the introductory section and throughout this book are endeavouring to do just that. However, despite a desire to model the plant use of the Indus from the inception of Indus archaeology and the now (and still growing) large amount of data available, there has been a long lamented 'lack' of Indus archaeobotany to provide the necessary grounding for thinking about Indus

peoples' uses of plants. Our region and its record are presupposed to be sparse and in some way inadequate for deeper discussions beyond taxa lists, an idea rooted in the very beginnings of Indus archaeobotany.

In their review of Indus archaeobotany Fuller and Madella (2002) noted how creative many early discussions had to be, with Marshall (1931: 27) and MacKay (1931: 324–5, 1938: 220–1) utilizing ceramic designs to fill in the gaps in the archaeobotanical record. Things have progressed – we no longer have to rely as Wheeler (1968: 84–6) did on artefact form, or assume species presence based on modern conditions and a few hand-collected seeds, just to make basic interpretations. However, even current works still lament and imply a lacuna in data, such as Weber et al. (2011: 809, emphasis added): 'The archaeobotanical record of the Harappan Civilization is for the most part based on the macrobotanical data collected from *fewer than* 50 Harappan sites ... there are *few examples* where large systematically collected and intensively sampled strategies were employed.' They went on to comment that 'all agricultural models of the Indus Civilization have been derived from this *limited database*' (809). In my own work I have also emphasized the perceived limits of the data: 'Archaeobotanical remains have been recovered from *only* 55 of the 140+ Indus settlements that have been excavated' (Petrie and Bates 2017: 88, emphasis added).

It is perhaps as a result of this supposed lack of archaeobotanical data that the Indus Civilization gets left out of many syntheses of ancient plant use, of early agricultural strategies and of debates on the global state of archaeobotany as a field of research. Beyond archaeobotany, we see Indus archaeology left out of curriculums globally from the lower school level to the university level, perhaps glanced at in a single lecture for the purpose of comparing it with Egypt and Mesopotamia, or briefly cited as an interesting case study on 'collapse'. Beyond this, though, the Indus and its plant assemblage has languished in the shadows.

Some blame can be laid at the door of historic research emphases. Much of Indus Civilization archaeology has focused on the 'cities', though even within this Harappa and Mohenjo-Daro have dominated research, with the other three – Rakhigarhi, Dholavira and Ganweriwala – commanding far less discussion. The focus on larger sites early in Indus archaeology has been a leading factor in the way Indus archaeobotany and agricultural stories developed (Chapter 11). The tendency to assume that 'city', 'town' and 'village' are self-explanatory terms related primarily to settlement size and certain shared features has had knock-on effects on our modelling of the relationships underpinning agriculture. As Wright (2010: 127) stated, this 'view of urbanism that concentrates on cities alone is only half the story', and Charlton and Nichols (1997: 9) have noted that 'cities cannot be understood apart from the larger societal structures in which they're embedded'.

Towns are often perceived as smaller versions of cities with slightly fewer of the features that make cities 'urban', and villages are perceived as small sites mostly without these features (see Eltsov 2008; Mehta 1993; Petrie 2013). A reliance on Childe's (1950) trait list is commonly seen in the Indus Civilization literature, and shown in the hunt for elite residences, road systems, fortifications, platforms, drainage and town planning (Eltsov 2008; Mehta 1993; Petrie 2013). Settlement size has also often been key to identifying Indus urbanism (e.g. in Wright's 2010 discussion of the role of secondary centres): the five 'cities' of the Indus have often been assumed to be such because they are so much bigger than other settlements. Harappa is *c.*150 ha, Mohenjo-Daro *c.*250 ha, Dholavira *c.*100 ha, Ganweriwala *c.*80 ha and Rakhigarhi *c.*80 ha (Kenoyer 1998: 50). Other sites have been clumped into a second tier based on the size of 'towns' such as Kalibangan at 11.5 ha (e.g. Kenoyer, 1998; Petrie, 2013; Wight, 2010). Within the system of terms created in/borrowed for Indus archaeology, villages, villagers and, by assumption, farmers have often been relegated to a realm of faceless rural masses because they have been presumed to have lacked elites. Such groups are rendered passive and 'unable to do anything of consequence on their own' (Pauketat 2000: 113).

Much of this discussion around settlement 'function' builds on ideas of exchange networks and thus economic systems in the Indus, but this has frequently been built on assumptions due to a lack of evidence. A feature often used to define sites has been elements of 'production'. For example, bead-working remains at Chanhu-Daro have resulted in this site being labelled a 'bead factory' (Mackay 1943) and shell fragments and broken bangles at Nageshwar and Bagasra have resulted in those sites being described as shell bangle production sites (Bhan 1992; Bhan et al. 2004), with little discussion of other functions occurring at the sites (though see more recent work by Law 2011). Food is a part of these production discussions: sites are either consumers or producers of food. Much has simply been assumed in this regard; small sites have been envisioned as agricultural villages feeding urban centres without data or discussion surrounding the agency or role of villages within this (though see Mehta 1993 for complicating this assumption, and discussions in Chapters 11–13 which show how this is being developed and altered).

Within this, elites have been typically envisioned as essential for urban Bronze Age cultures and seen as the prime movers of societies because of the focus of research in the Childe (1950), Service (1962) and Fried (1967) era of searching for social hierarchies and 'the state'. The hunt for elites has played a vast role in Indus archaeology (see Wheeler 1950 and the 'priest-king' as an example of this, and see summaries in Green 2020). It has been unconsciously assumed that non-elites capitulated to elite dominance (Pauketat 2000), part of

the larger assumptions around the active role of cities and passive role of villages, the consumers versus the producers of goods and food.

Historically, then, in Indus archaeology there has until recently been a tendency to overlook villages and their inhabitants and, by consequence of this, agricultural systems. When villages have been explored, it is not in terms of their own agentive powers or positions in the Indus system, but in terms of how changes at the top of the system would impact them, or how external forces (e.g. climate change) may have acted on them or through them to impact the top. One of the reasons smaller sites and the supposed main products of such sites – agricultural goods – have often been neglected both in terms of excavation and discussion (Mehta 1993: 168; Ratnagar 1991; Schuldenrein, 2002) may be that both small settlements and agricultural goods are often less visible or durable than larger settlements or elite goods. Small sites are more easily destroyed and less commonly funded for excavation efforts, while agricultural products like plant remains can be hard to recover for taphonomic and preservation reasons (Chapter 3). The agricultural village and villager were likely a key part of the social structure as basic food producers, but they have been overlooked in models of social organization in favour of evidence from cities. Of course this assumes that villages and villagers are indeed the prime food producers and that all agriculture is happening in city hinterlands. As Chapter 11 will explore, this may not always be the case.

And this might also hark back to some of the early conceptions of the Indus that haunt us to this day. In a seminal work Wheeler (1950: 28–9) described the Indus as 'ordered, regulated . . . dull' with 'astonishing sameness'. Agriculture was envisioned as based on wheat and barley; comparisons made with Mesopotamia and Egypt used to describe how these winter cereals supported the surpluses needed for urbanism in a similar fashion to the better understood Near East Bronze Age. It was an easily transplantable ideal.

Recently Indus archaeology has taken a turn: far from dull, the Indus is now recognized as variable, diverse and nuanced, with regional underpinnings breaking down the 'homogenous' material culture and possibly a heterarchical structuring (see Green 2020 for summary), making the sociopolitical system far more exciting than described in the twin-capitals models of Marshall (1931), Piggott (1950) and Wheeler (1950). Archaeology and archaeobotany are now critical in exploring sites beyond cities and understanding the entire social structure of the Indus, not just its urbanism (Chapter 11). This book shows how complex Indus agriculture was within this, and how the diversity turn in Indus scholarship has worked to break down the pan-Indus models of 'sameness' made so pervasive by Marshall, Wheeler, Piggott and other early writers.

Yet a hint of this 'dullness' remains in many of the agricultural models. A sense of comparative need persists: we see in Meadow's (1989) discussions, for example, an explicit statement of Indus agriculture as very Mesopotamian in nature because, save for a few 'fringe' sites, he envisioned the Indus as based on the wheat and barley that was necessary to maintain urban surpluses. In other places grand pan-Indus narratives recreate the homogeneity that has plagued the Indus for so many decades – in Weber's (1998) discussion we see elements of similarity (save for Gujarat) until the later periods with 'traditional' crops (wheat and barley) replaced only in the Late Harappan period by summer crops (see also Madella and Fuller 2006 on a pan-Indus response to Late Harappan climate change).

An idea of Indus agriculture as based on simple systems driven by the urban 'elites' or inhabitants has led inevitably to either a sense that the agricultural system does not need to be explored in as much detail as other aspects of Indus life – at least not till the Late Harappan period, when interesting things relating to climate change may (or may not) happen, when cause/effect impacts on larger societal structures might be seen – or to a feeling that it has been solved; it was simply wheat/barley driving the urban centres of the 'core' with millets out at the rural 'periphery'. In all of these more recent cited papers there is nuancing, with caveats that at no point was the Indus monolithic, but the sense lurks that people were *predominantly* doing one kind of cropping. Nuancing of 'big' modelling has occurred over time, but time and again the ideas surrounding Indus agriculture have fallen back to discussing pan-Indus modelling. And this is a problem – the Indus was far more complex, and we know it.

THE STRAW MAN LIVES?

This is of course an old and tired straw man – Indus archaeobotany is replete with examples of nuanced and complex models of agriculture beyond wheat and barley 'core' and millet 'periphery', and a lack of interest until the Late Harappan. In his history of Indus archaeobotanical practices in South Asia, Fuller (2002) sums up how ideas have developed and changed, how new data have been ably synthesized and new paradigms created, and how the early twentieth-century model of a Mesopotamian-style Tritacea-based economy has been long left behind.

Yet the concept lingers, perhaps not in Indus archaeobotany but in broader archaeobotany and archaeology, that Indus archaeobotany is somehow lacking or problematic (see Cowgill 2004 and Marston et al. 2015 for examples where Indus archaeology or archaeobotany has been afforded the merest mention or left out of discussions).

The aim of this volume is therefore twofold – to *again* bring about the fall of the straw man, to show how diverse, nuanced and complex Indus agriculture was, and to demonstrate the potentials of our now vast archaeobotanical data sets. In doing so this book stands on the backs of many: Besenval, Costantini, Costantini-Biasini, Farooqui, Fujiwara, Fuller, García-Granero, Goyal, Kashyap, Lancelotti, Madella, Miller, Pokharia, Reddy, Saraswat, Savithri, Srivastava, Tengberg, Thiébault, Vishnu-Mittre, Wagner and Weber, to name but a few. This book makes no effort to hides this – I am not covering new ground. In drawing out the narratives of nuance in our data sets, I am simply putting them in one place – and therein lies the second goal: to create a coherent picture of the state of play, as this author sees it, of Indus archaeobotany. I aim to put into a single place both the more 'scientific' discoveries (the origins and dating, etc. of plant finds) and the more 'social' theory (how the seeds link to Indus social organization and change). Inevitably this cannot be fully comprehensive; not all archaeobotanical finds can be discussed in detail, nor all published papers on the topic. Instead the goal is to create an overall narrative outlining where I believe the field has reached, the evidence supporting this, and in doing so to highlight areas that may need further investigation. Hopefully through this the straw man can be killed once and for all and its death set aside. In doing so the great discipline of Indus archaeobotany can be brought further into the general consciousness.

A NOTE ON TERMS AND STRUCTURE

Before moving into the book it is useful to lay some ground rules. Multiple terms are employed in the public conversation to talk about where our food comes from and the acts of food procurement supplying societies and sustaining them.

The Indus Civilization engaged in both food production of domesticates and food gathering of wild resources at a very basic level (to mangle some highly complex theory on the nature of production/gathering, domesticated/wild – see Harris 2007; Langlie et al. 2014; Larson et al. 2014; Zeder 2015; Zohary 2004 to unpack this and disentangle this oversimplification).

Terms often used in reference to the 'production' of food that come up in much of the literature include 'agricultural production', 'agricultural system', 'agriculture', 'cultivation', 'horticulture', 'husbandry' and 'pastoralism'. While there is a wealth of discussion behind these ideas, Harris (2007: 18) has noted with concern that they have become 'catch-all' terms used interchangeably to describe 'complex food production' either of plants or animals or both, poorly defined and conceptualized.

As this volume is dedicated to archaeobotany and some lines need to be drawn to explain how these concepts are going to be used herein, these are the

theoretical underpinnings of *this* book, not necessarily grand statements on a theory of 'agriculture', 'cultivation' and so forth.

To begin with, we can set aside 'husbandry' and 'pastoralism' as these terms deal with animal care (Harris 2007). Exciting work on Indus zooarchaeology is occurring such as recent papers by Chase (2012a, 2012b, 2014), Chase et al. (2014a, 2020), Abhayan (2016), Abhayan et al. (2018) and Lightfoot et al. (2020). I will return to zooarchaeology on occasion throughout this book, but it is not the focus and requires a whole volume of its own to explore the methodological and theoretical intricacies of the Indus faunal data set. Then perhaps a careful weaving of the botanical and faunal records can be carried out for a more holistic exploration of Indus peoples' interactions with their environments and their food choices.

'Agriculture', however, has in general usage become a very broad term, encompassing all aspects of primary food production from growing/rearing plants and animals to harvesting/culling them for food. Collins English Dictionary (Butterfield 2003) defines 'agriculture' as 'the science or occupation of cultivating land and rearing of crops and livestock; farming', referring to land preparation and the raising of plants/animals for food. Within archaeology specifically, Vrydaghs and Denham (2007) expand on this and refer to it as a 'lifestyle' rather than just specific acts relating to food production, perhaps showing how linked to the idea of culture and social relationships 'agriculture' as a term has become. The Oxford English Dictionary (OED) (Burchfield 1971), on the other hand, takes a much narrower view, limiting animal and crop husbandry to an 'allied pursuit', focusing on agriculture as only the 'science and art of cultivating the soil'.

Harris (2007), sticking closely to the OED, defines agriculture as something exclusive from animal husbandry and rearing. He suggests that, coming from the Latin *ager* (a field) and *colo* (to cultivate), 'agriculture' should be used as a specific term relating to the tillage of land for crop production. He also distinguishes 'cultivation' from agriculture by defining cultivation as a general term for all forms of plant growth–promoting activities, thereby including both hunter-gatherer plant management and the deliberate planting and tending of plants (Harris 2007: 25).

Following Harris (2007) I will be using the term 'agriculture' to describe the activity of preparing land and growing plants for human use. 'Cultivation' will refer to actions that promote the growth of plants such as tillage, irrigation and weeding (following Harris 2007; see also Burchfield 1971) and include ways of collecting plants such as harvesting.

With a couple of plant-growing and plant-using terms defined, it is important to turn to chronology. Indus chronologies are notoriously complex. The date range of the Indus Civilization was, for a long time, highly debated given the difficulty in creating relative chronologies and a lack of

systematic collection and analysis of absolute dates. Following the increase in reliably acquired radiocarbon dates and advances in calibration, it is now generally suggested that the Indus Civilization's Mature or Urban phase began *c.*2600–2500 BC and began to decline *c.*2000 BC (Lal 1994: 23), making it a contemporary of Early Dynastic and Akkadian Mesopotamia (see Kenoyer 1998: 17; Table 1.1). Great debate remains about when the pre-urban period began, with some discussion over the radiocarbon dates in the north-eastern region of the Indus Civilization of particular import in that discussion (see Dikshit 2013; Mani 2008; Nath 2018; Rao et al. 2005; Sarkar et al. 2016). For the sake of this book, the generally accepted fourth millennium BC will be used.

The internal periodization of the Indus Civilization remains highly debated. The first division of the Indus chronology was produced from the 1925–6 excavations at Mohenjo-Daro by Marshall and Mackay, who divided it into Early, Intermediate and Late phases (Franke-Vogt 1991: 87; Mackay 1938). This produced disagreement amongst scholars as these divisions cannot always be clearly seen at all sites (Franke-Vogt 1991: 93), and each site has its own stratigraphic terminology. For example, the 'early' phase at Mohenjo-Daro refers to the first part of the urban period; rather than the Early Harappan system seen at other sites (Franke-Vogt 1991: 93), the Harappa excavation used a system based on the urbanization and stratigraphic phasing of the site linked to radiocarbon dates, and sites like Rojdi have internal periodization (Rojdi A, B, C/D – see Weber 1991 for this system's use in archaeobotanical analysis).

To try to resolve the problem, Mughal (1971) divided the Indus Civilization into the Early, Mature and Late Harappan periods. This was quickly questioned, as it was suggested that the use of 'Early Harappan' 'seems to imply that this stage led by itself to the stage of civilisation' (Chakrabarti 1984: 48). Alternative terms suggested include 'Pre-Harappan'. However, this in itself is problematic as it precludes the notion of continuity and again suggests a linear chronology – that in order to have a 'Harappan' phase there must be a 'Pre-Harappan' phase.

In recent years two chronologies have become prominent: Traditions (Shaffer 1992) and Phases (Possehl 2002: 29). Both attempt to move beyond the linearity and evolutionary implications of earlier chronologies in order to incorporate regional differences in material culture. Within this book the Phases chronology of Possehl (2002) will be used (Table 1.1). Unlike the Traditions chronology it relies less on the site of Harappa, breaking the supremacy of a 'type site', and does not assume that the chronology of the Indus will be the same across the entire region. It allows for flexibility and variability and incorporates the regionality seen in the material culture, something this book hopes to demonstrate the agricultural system does as well.

One further point to consider is the term used for the later phase of the Indus. 'Late Harappan' and 'Post-urban' are two terms offered in texts. Possehl and

TABLE 1.1 *The phases chronology after Possehl (2002: 29). This chronology incorporates Possehl's domains rather than focusing on one site.*

Stage	Dates	Regional Phases
Early Farming Communities and Pastoral Camps	7000–4300 BC	Kili Gul Mohammed Phase 7000–5000 BC Burj Basket-Marked Phase 5000–4300 BC
Developed Villages	4300–3200 BC	Togau Phase 4300–3800 BC Kechi Beg/Hakra Phase 3800–3200 BC
Early Harappan	3200–2600 BC	Amri-Nal Phase[1] Kot Diji Phase[1] Sothi-Siswal Phase[1] Damb Sadaat Phase[1]
Early to Mature Harappan Transition	2600–2500 BC	
Mature Harappan	2500–1900 BC	Sindi-Harappan Phase[2] Kulli Harappan Phase[2] Sorath Harappan Phase[2] Punjabi Harappan Phase[2] Eastern Harappan Phase[2] Quetta Phase[2] Late Kot Diji Phase[2]
Late Harappan	1900–1300 BC	Jhukar Phase 1900–1700 BC Early Pirak Phase 1800–1700 BC Late Sorath Harappan Phase 1900–1600 BC Lustrous Red Ware Phase 1600–1300 BC Cemetery H Phase 1900–1500 BC Swat Valley Period IV 1650–1300 BC Late Harappan Phase in Haryana and Western Uttar Pradesh 1900–1300 BC
Early Iron Age – Painted Grey Ware (PGW)	1300–500 BC	Late Harappan and PGW Overlap Phase 1300–1000 BC PGW Phase 1100–500 BC

[1] These phases are contemporaneous and occur in different regions, unlike those of the Early Farming Communities and Pastoral Camps and Developed Villages, which occurred chronologically (with some overlap) in the Indo-Iranian borders.

[2] These phases too are contemporaneous and refer to regional cultural affinities rather than chronological phases.

Ravel (1989: 18) argued that 'Late Harappan' is too often abused and confused and that therefore 'Post-urban' is more suitable. The end of the Harappan period is difficult to define – it was not a sudden event – and therefore Possehl (2002) also suggested that 'Post-urban' is a more appropriate term to describe the gradual decline and changes in the socio-economic structures. However, 'Post-urban' also implies that urbanism is the only defining feature of the Mature Harappan period and that the key feature of the later period is a lack of urbanism. Not all urban sites ended in the same way, and indeed not all urban sites were

'abandoned' and became 'post-urban' in the same ways. 'Late Harappan' is therefore the preferred term in this book, but it is recognized that this term, and indeed the entire chronology of the Indus, is difficult and problematic, a problem beyond the scope of this book. The seeds collected by archaeobotanists, however, are critical in resolving this, providing as they do reservoirs of carbon for refining the directly dated chronologies.

With a chronology set out to guide this book, it is worth also outlining a structure. According to a great mentor and colleague, there are many ways to slice the pie, to explore the data (Petrie pers. comm.). Archaeological science data provide opportunities to explore many questions, but only if the groundwork is laid. This groundwork for Indus archaeobotanical data includes demonstrating what plants were being used, where and when, and also what materials we are looking at and how they were collected.

To that end the first two chapters set out the geographical and climatic background and the overall picture of Indus archaeobotany. This updating of the background – the environmental setting and the spread of the data itself – provides a vision of the state of the field, a summary of where and what informs the rest of the book.

The first half of the book then dives into the main plants found in the Indus data sets. Each chapter looks at the taxa, what we know about their origins from an archaeobotanic and archaeogenetic perspective; how, where and when they arrived in the Indus region; and where they are found across the Indus Civilization. Wheat, barley, rice, millets, pulses, fruits and oil/vegetal/spice seeds are explored individually so as to build up a picture of the complexity of Indus plant exploitation. A chapter is also reserved for microfossil analysis and examining how phytoliths and starches in particular are changing what we understand about the field.

With this under its belt the book moves into what we can do, and indeed what archaeobotanists have done, with plant remains in the Indus Civilization. The aim is to demonstrate how rich the theoretical body of work is, and how important plant remains are to the story of Indus life that we currently have. It will break down the straw man through examples of the extraordinary work many Indus archaeobotanists have done. Themes include how crop processing can be used to think about social connectivity and economic organization; whether there was an intensification of Indus agricultural systems over time; how this might link to changes in sociopolitical structures and regional diversity in cropping strategies and how this links with the material culture; what plants were used beyond agriculture; and what happened in the Late Harappan period and why. The goal is, as stated, to explore the diversity of Indus peoples' plant use, to show the importance of archaeobotany to Indus archaeology and of Indus archaeobotany to comparative archaeobotanical stories.