Supporting Information

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SI Methods

The samples were floated using bucket flotation as described in Fritz (1), Pearsall (2, pp. 29–33), and Watson (3, pp. 79–80), and clods of earth were broken down using water separation by means of manual agitation. After agitation, organic materials were decanted from the upper portion of water. A geological sieve of 0.25 mm was used to catch light fraction material. Once in the laboratory (Washington State University), samples were re-sorted using geological sieves. The sieve size used for samples varied depending on the variation in particle size. Typically, all botanical material larger than 2.00 mm was sorted as one unit; smaller material was broken down into units using sieves of 1.50, 1.00, 0.71, 0.50, 0.355, and 0.25 mm. Material smaller than 0.25 mm was left in a unit labeled "pan." Pan material was scanned but was not analyzed systematically. Reference collection material consulted included Jade d'Alpoim Guedes' personal reference collection, Harvard University Herbaria, and material from the Environmental Archaeology laboratory at Boston University. The *Flora of China* (4) and illustrated archaeobotanical and modern seed identification guides (4–8) were used frequently to determine the list of species present in the Chengdu Plain and to narrow down possibilities for identification.

SI Results

Finds of flax were unearthed in layer L4 and in the two pits on the periphery of the excavated site that date to 400–1 cal B.C. A phylogenetic analysis suggested that flax was domesticated only once, for use as an oil plant (9, 10), and archaeological evidence supports its use in the Near East throughout the early Holocene (11–17). Bast fibers from flax also can be used in textile production. The earliest concrete use of flax-based fibers emerged around 8500 cal B.C. in the Near East (10, 15), although some argue this use may have taken place earlier (18, 19) In South Asia and Nepal the earliest finds of flax date roughly to 2000–1500 B.C. (20–26). To date, no archaeobotanical finds of flax have been made in China, and most evidence for the use of flax there is textually based and dates to the Han dynasty (27). The specimens of flax from Ashaonao are noticeably smaller than other wild varieties from China and those from elsewhere (28); the flax found at Ashaonao thus may not have been an import from western Eurasia but instead may have a local wild species (Fig. S6). We argue that the large numbers of flax seeds uncovered at Ashaonao suggest that flax was used as an oil or food crop in this region during the second century B.C. Stands cultivated for fiber often are harvested before seed production, and thus finds of seeds are more likely to indicate a use as food crop (17). In addition, most early textual descriptions of flax in China speak of its use as an oil crop; the use of flax for fiber is introduced to China only at the beginning of the 20th century (9).

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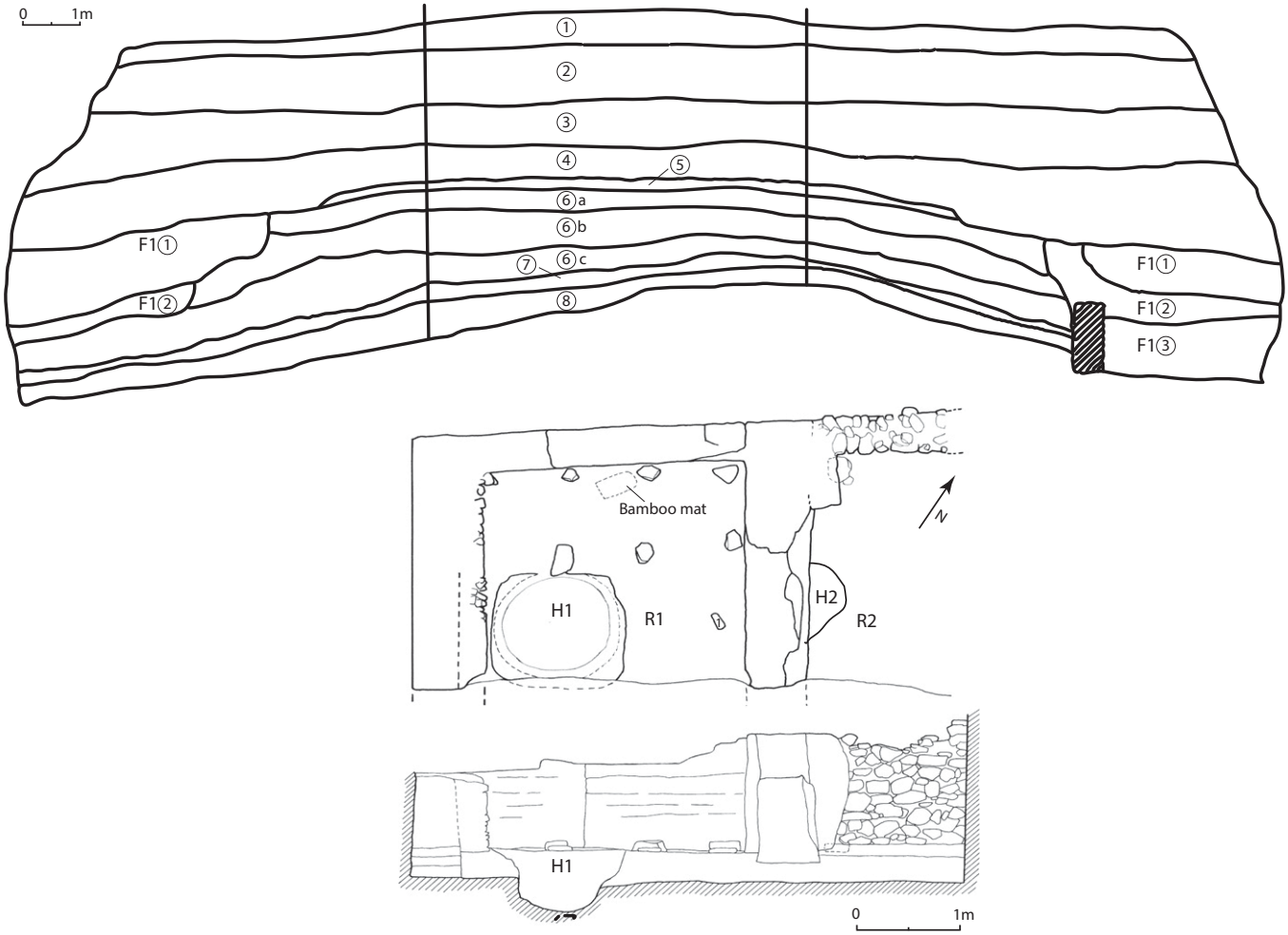

Fig. S1. Excavation plans of the Ashaonao site. (*Lower*) The house feature. (*Upper*) The stratigraphic layers of the baulk wall.

Fig. S2. Pottery unearthed at the Ashaonao site. (*A*) Han dynasty pottery. (*B*) Majiayao period pottery.

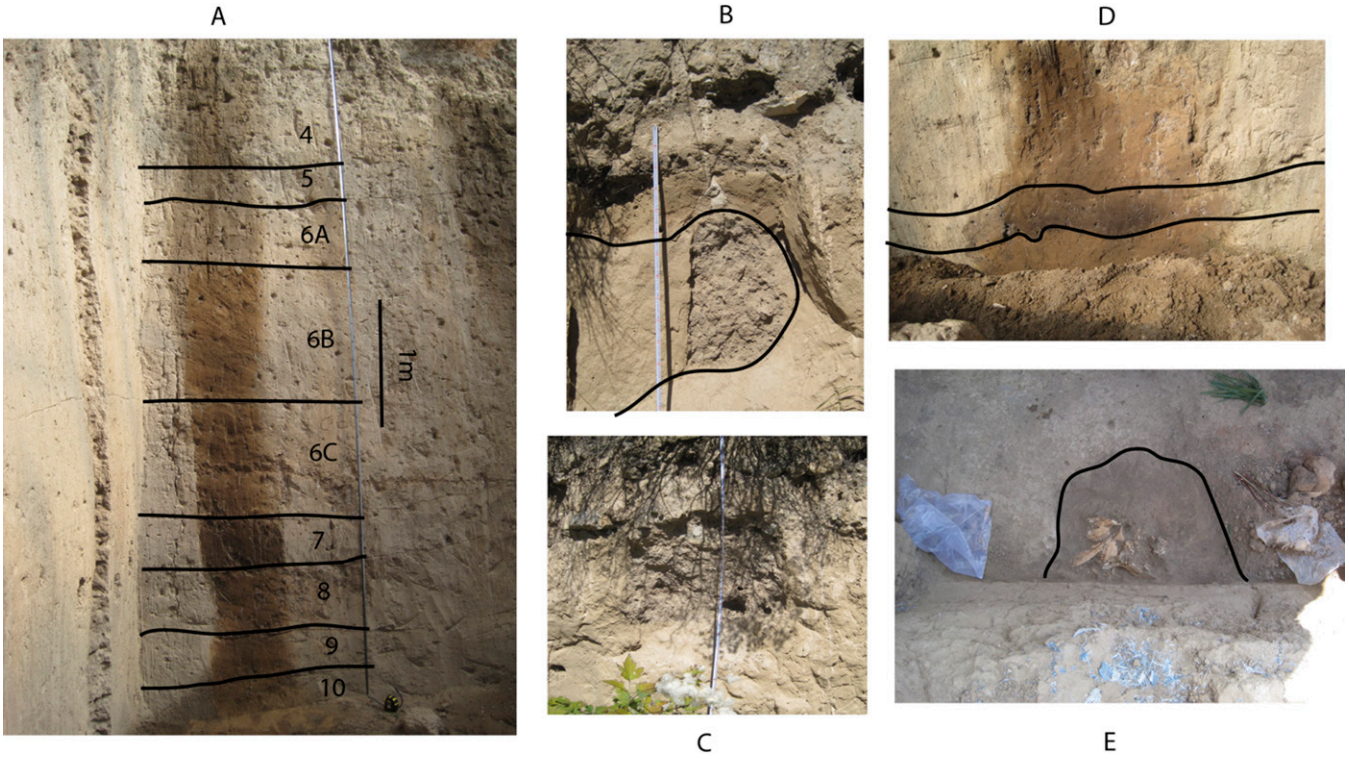

Fig. S3. Areas where sampling for archaeobotanical remains was carried out at the Ashaonao site. (*A*) The area where sampling was carried out on the North wall. This area constitutes the central part of the stratigraphic diagram in Fig. S1. A column sample was taken from each layer. (*B*) Pit LT4EH2. This pit was located to the east of the excavated area. (*C*) Pit LT4EH1, another pit located next to LT4EH2. (*D*) Potential destruction layer (east wall Shineiduiji) corresponds to layer FI (3) shown in Fig. S1. (*E*) Pit containing animals bones (H2) located in area R2 shown in Fig. S1.

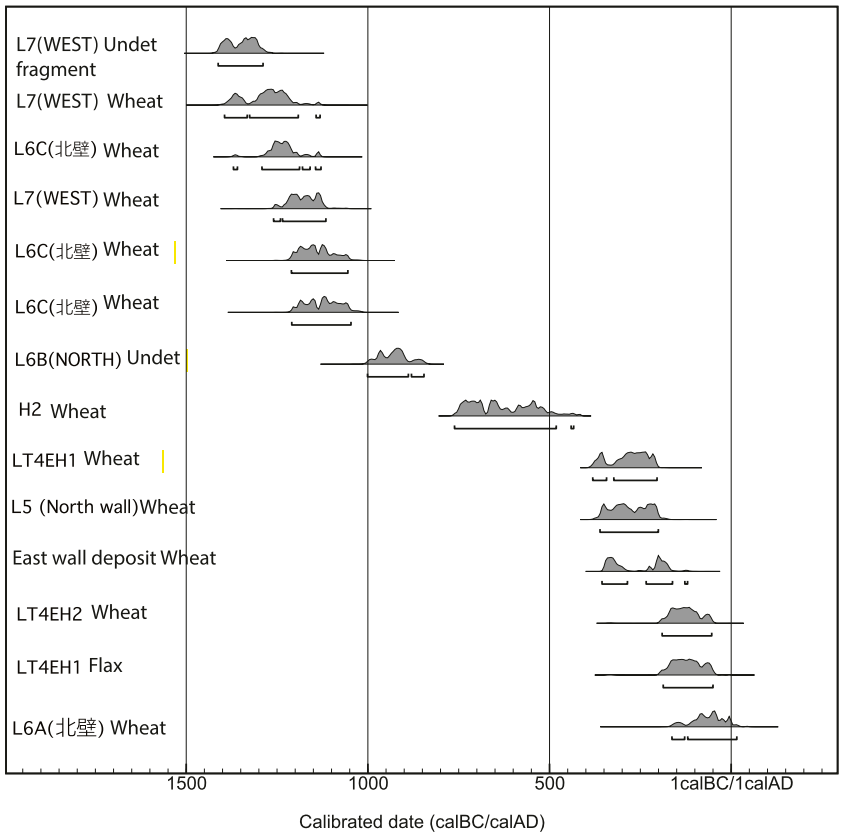

Fig. S4. Radiocarbon dates from the Ashaonao site. The house cut into layers that predate the Han dynasty and temporally overlap with the period that relates to the stone-cist tombs. Layers inside the house, fill layers, and those outside the immediate excavation units date to the Han dynasty.

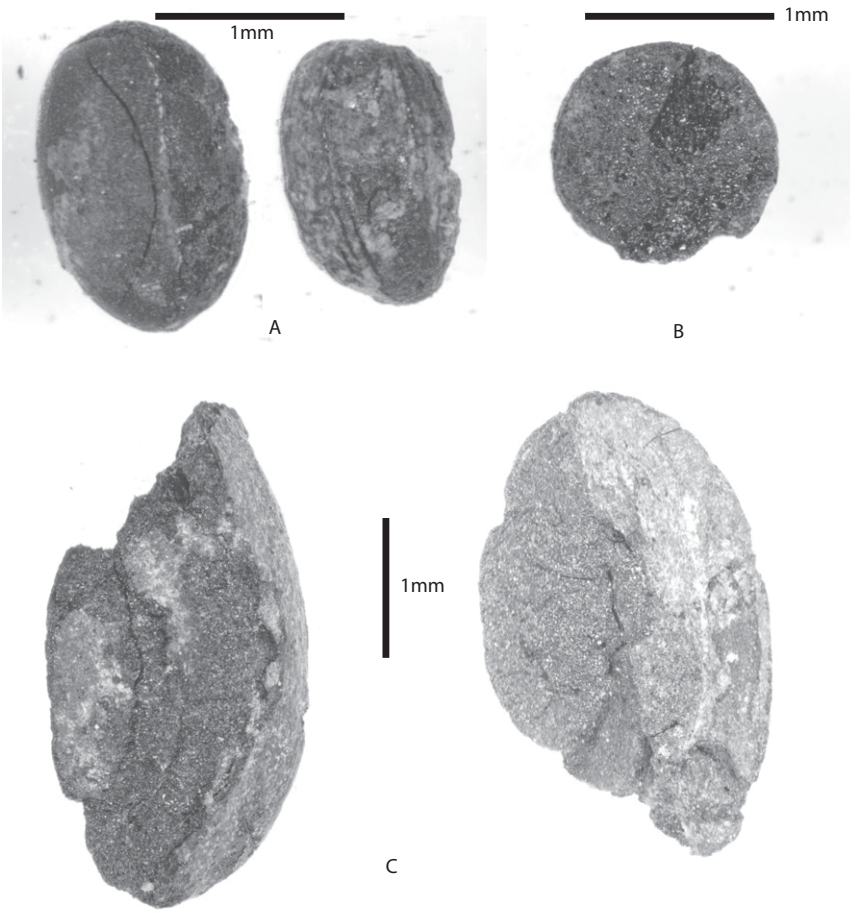

Fig. S5. Wild plants unearthed at the Ashaonao site. (*A*) *Hippophae rhamnoides*. (*B*) *Vicia* sp. (*C*) *Prunus* sp. endosperm.

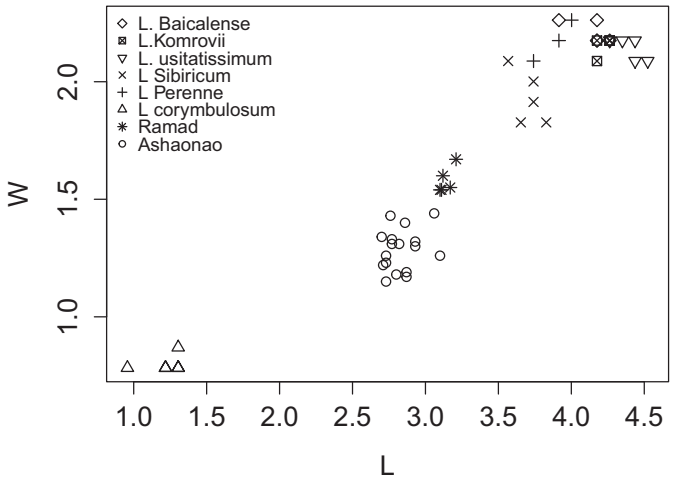

Fig. S6. Measurements of wild species of flax from eastern and northern Asia compared with those from the Ramad site and the Ashaonao site ($n = 51$). A shrinkage ratio of 13% that has been suggested by Van Zeist and Bakker-Heeres (12) was applied to herbarium specimens. We compared the measurements of flax seeds from the Ashaonao site with those of wild and domesticated species of flax from China and from Mongolia in the Harvard University Herbarium and with potentially domesticated seeds from the Ramad site in southeastern Turkey (28). Nine endemic species of wild flax exist in China (27), but it is unclear whether these species are feral.

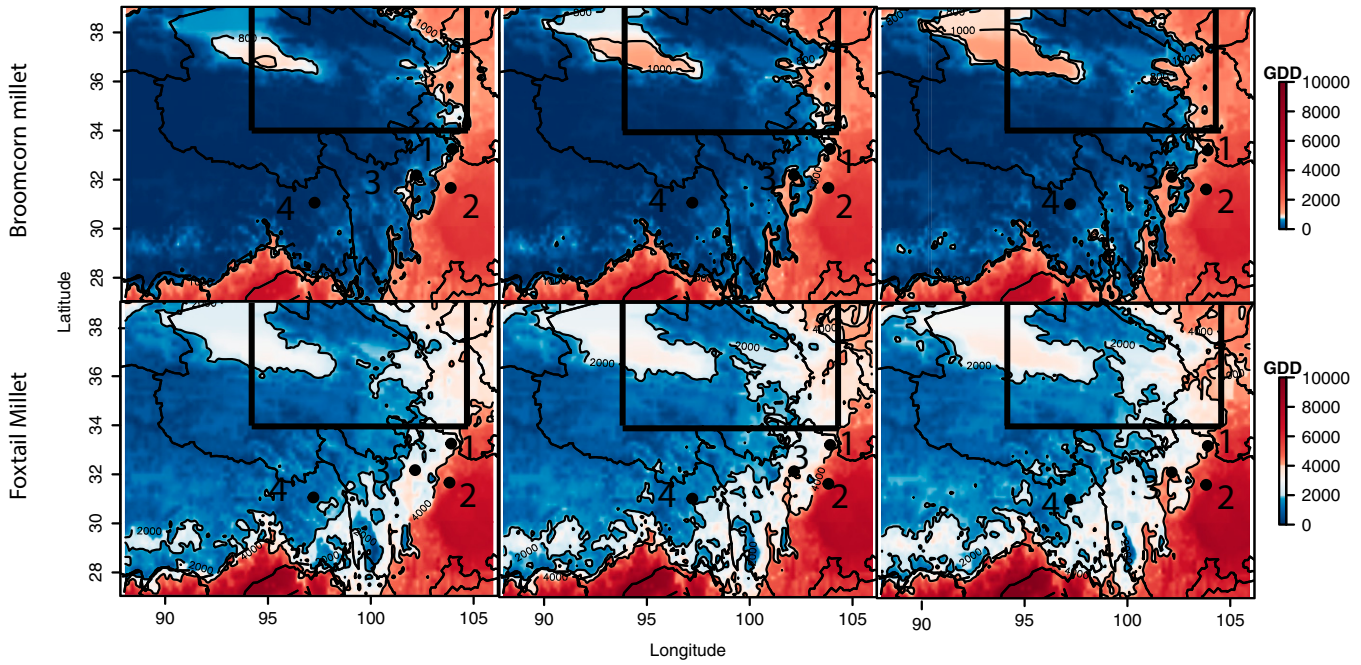

Fig. S7. The niche for growing broomcorn millet and foxtail millet at higher than present-day temperature ranges. The areas where each crop can be cultivated successfully are shown in red. The border zone for cultivable viability is shown in white. Some varieties may be cultivated in this area. The crop represented cannot be cultivated in the areas shown in blue. The black-bordered box represents the NETP. Black dots represent archaeological sites discussed in the text: 1, Ashaonao; 2, Yingpanshan; 3, Haxiu; and 4, Karuo.

Other Supporting Information Files

Dataset S1 (XLSX)
Dataset S2 (XLSX)