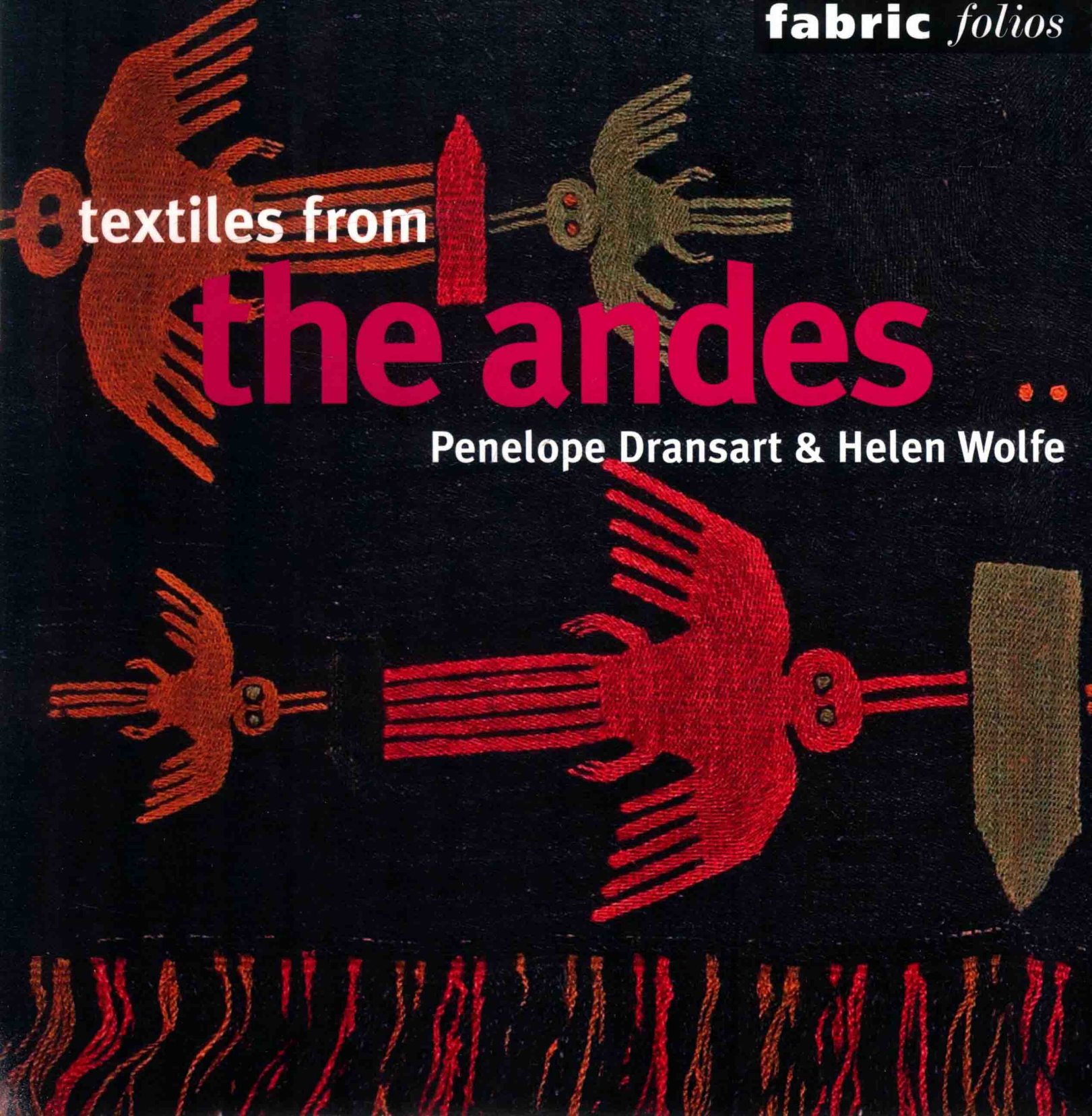
fabric *folios*

textiles from the andes

Penelope Dransart & Helen Wolfe



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AND HELEN WOLFE

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The textiles illustrated in this book are from the collection of the British Museum. The British Museum object registration numbers and donor information are listed on p. 86. For further reading, see p. 84. You can find out more about objects in all areas of the British Museum collection on the museum website at www.britishmuseum.org.

The names and designations used on the map on p. 21 do not imply official endorsement or acceptance by the British Museum.

COVER: Border from an embroidered mantle from Paracas. (See pages 24–5)
INSIDE COVER: Detail from a cotton warp and camelid weft textile.
PAGE ONE: Detail from a large plain-weave painted cotton textile from Peru.
PREVIOUS PAGES: Detail from a tapestry-woven shawl. (See pages 78–9)
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Opposite are details from a selection of textiles
TOP: Hat, Chimú. (See pages 52–3)
LEFT: Textile fragment, Chancay. (See pages 56–7)
RIGHT: Tunic fragment, Wari-related. (See pages 44–5)
BELOW: Tapestry tunic fragment, Wari. (See pages 42–3)

introduction

The Inka state emerged in the late fifteenth and early sixteenth centuries from its heartlands surrounding Cuzco to dominate all others. It controlled a vast swathe of the Andes stretching from southern Colombia in the north to the central valley of Chile and north-west Argentina in the south. This great territorial sweep also incorporated most of the modern nations of Ecuador and Peru, as well as highland Bolivia. Inka dominance came to an end in the 1530s with the arrival of the Spanish and the colonization of the region. The extent of the Inka state approximates the geographical scope of this book. Fabrics from its territories and from periods of time long before the

FIGURE 1
Pre-Hispanic bag of simple looping worked spirally from the base using camelid and vegetal fibre yarns.
9 x 7.5 cm

Inkas are held in the British Museum's collection of Peruvian and other early Andean textiles.

Most of the fabrics and textiles selected here fall within a date range of approximately 200 BC to the late eighteenth century AD. Among the earliest examples are those from the vicinity of Paracas, which is located on the southern coast of Peru. Other pieces are associated with the major archaeological cultures of the Andes, including Nasca (*c.* AD 100–800), Wari (*c.* AD 500–1000), Chimú (*c.* AD 900–1450) and Chancay (*c.* AD 1200–1470). More recent examples belong to the Inka period (fifteenth to sixteenth century AD) and Colonial period (sixteenth to nineteenth century AD), while two twentieth-century textiles provide evidence for a tradition which still continues with vitality today.

Many of the items included here were obtained from archaeological sites in the nineteenth and early twentieth centuries before the introduction of excavation under rigorously controlled conditions. As a result, the dates of individual pieces are only approximate and have been assigned on the basis of style. The textiles selected for this book are presented in roughly chronological order and the name of the style (or cultural attribution) appears in the caption. In terms of this book, therefore, 'style' refers to the classification of items on the basis of spatially distributed attributes, which change through time. 'Style' is also used to refer to the formal variations that can be seen in the making of fabrics.

Fabric structure, which is concerned with the relationship of the elements (such as threads, weaves and stitches) in the finished item, is an important aspect of understanding style. The pieces selected for this book provide a vivid demonstration of the prowess of Andean spinners, weavers and dyers over long periods of time, not least when it comes to their structure. Weavers incorporated their cultural identities into their textiles by using certain fabric structures and not others. Some of these structures were woven repeatedly over many millennia, and the continued use of particular types of structure preserved memories of style inherited from the distant past. Textiles with a discontinuous warp exemplify a characteristic Andean structure (see pp. 38–9); they will be considered in more detail below.

The arid desert conditions prevailing in many Andean coastal regions and the high altitude of mountain-top shrines located at heights of 6,000

metres above sea level or more have both helped to preserve pre-Hispanic textiles (those dating from before the European invasion of *c.* 1532). Indeed, most of the ancient Andean textiles represented in different museums of the world survived in desert tombs, and the British Museum's collection is no exception. It is also evident that complex mortuary rituals involving the wrapping of human remains with clothing and other adornments were practised from ancient times and survived into the Colonial period. Hence the examples considered in this book are mostly items of dress or fragments of garments and of other textiles used to furnish tombs.

RAW MATERIALS

Andean spinners and weavers exploited the full range of available raw materials. The earliest fabrics were made from yarns spun from non-cotton vegetal fibres and the hair of vicuña and guanaco, both types of wild camelid related to the domesticated alpaca and llama. Hard leaf fibres were obtained from plants such as agaves. Alternatively, soft bast fibres were extracted from the stems of some plants or from the inner bark of certain trees and shrubs (see fig. 1). Yarn and fabric remains from the site of Guitarrero Cave, in Peru's Callejón de Huaylas, are up to 10,000 years old. The botanist C. Earle Smith Jr. studied large amounts of waste and partially processed material from the cave and found that bromeliads (plants belonging to the pineapple family), *Puya* and *Tillandsia* leaves were used as sources of leaf fibre. The occupants of the cave also stripped and twisted yarn from the pulpy leaves of *Furcraea*, a plant belonging to the amaryllis family, known locally as *cabuya*. It is less easily worked than the other plants, but in time it became an important source of fibre. Bulbs of *Cypella peruviana* (a member of the iris family), with a resinous or oily content, could have served to finish yarn spun from plant fibres prepared inside the cave.

Camelid fibre has been spun for at least 11,000 years in the Andes. Of the four species of camelids native to South America, two (vicuña and guanaco) are wild and two (alpaca and llama) are domesticated. Camelid hair does not contain the short, coarse fibres known as 'kemps', which are characteristic of sheep fleece. The brittle kemps make wool difficult to spin, and it was only after the development of fine woolly fleeces in domesticated sheep that Asian and European spinners began to spin wool on a large scale. In contrast, Andean spinners were using vicuña and guanaco hair to make yarn and non-woven fabrics before they had domesticated camelids. In the period between 9000 BC and 1500 BC hunter-gatherer peoples in the South-Central Andes, especially from northern Chile and north-west Argentina, frequently spun the hair of vicuña or guanaco into yarns for wrapping round the head in turban-like headdresses or for bags and shawls made from looped and twined fabrics (a looped fabric is illustrated in fig. 1).

The domestication of camelids began about 6,000 years ago in the Central Andes. There is, however, little surviving evidence for camelid fleece from this period. Large quantities of fleece and yarns and a few looped fabrics were excavated from a site called Tulan 54, which is situated in a

valley south-east of the Salar de Atacama, Chile's largest salt lake. Radiocarbon measurements on yarn samples date the site to about 1000 BC. The people of Tulan herded their own llamas, but they also hunted vicuña and guanaco. Most of the hundreds of yarns excavated from the site were spun from camelid fibre.

The Tulan 54 material also demonstrated what the camelids looked like. Nearly all the fleece colours in the yarns fall within a natural brown spectrum of colours, with a small proportion of white. These colours are similar to those of guanaco and vicuña. Guanaco have rich tawny brown or faded brown along the back and flanks, a white belly and neck, and a smoky grey-brown neck. Vicuña in the South-Central Andes have light cinnamon brown along the back and flanks, and a white belly, neck and chin. The herd animals of the Tulan people still largely resembled their wild counterparts. They did not yet display the range of black, brown and grey colours characterizing present-day llamas and alpacas, which can be seen in the Inka bag on pp. 76–7.

With the cultivation of cotton, which began at least 4,000 years ago in the coastal regions of what is now Peru, spinners and weavers gained access to an important new fibre source. As a crop, cotton requires abundant supplies of water. Irrigation in this area began in the period 1800–900 BC. By around AD 1300, under Chimú influence, the amount of land given over to irrigation had reached its greatest extent; its coverage exceeded that of present-day agriculture. This expansion enabled farmers to produce quantities of cotton in

FIGURE 2 Pre-Hispanic cone of cotton prepared for spinning.

colours of natural ivory and brown (pp. 64–5). The astonishingly large collections of cotton textiles preserved in many museums of the world were taken from mummy bundles from Peru's central coast, providing evidence for this late pre-Hispanic productivity.

Over time, cotton and camelid fibre became the most important raw materials for use in Andean textiles (fig. 2). Spinners and weavers did, however, retain the expertise to process other fibres. Examples in the British Museum include an elaborate braid, composed of different elements, where non-cotton vegetal fibre yarn in the oblique interlacing is wrapped at regular intervals using dyed fleece (pp. 28–9). An Inka embroidered cord accompanying a miniature-sized shawl provides another example. The close-up detail on p. 74 shows one of the ends of the cord, where a two-ply yarn is used to attach a silver dress pin.

COLOUR

The arid and freezing conditions in which Andean textiles have been found favour the preservation of the dyes used in making them, and the colours of these range across the spectrum in, at times, a surprising number of shades. Red is the oldest example of a dye detected in archaeological materials. From the north (at La Galgada in Peru) to the south (at Tulan 54 in Chile), and from 3000 BC onwards, when La Galgada was first occupied, people knew how to achieve the complicated

process of extracting red dye from the roots of *Relbunium* species. These plants are related to those serving as the source of the dyestuff madder in other parts of the world. The dye extracted from the cochineal insect was a later development; it became the best known source of red in the Andes. By late pre-Inka times cochineal seems to have replaced the use of *Relbunium* and other plant sources of red dye. Blue was obtained from indigo species and a particularly attractive greenish blue is characteristic of Tiwanaku-style tapestry tunics. Green seems to have been formed by combining indigo with a yellow dye. Textiles from the central coast of Peru, especially those from late pre-Hispanic times, display striking red-and-yellow colour schemes (pp. 50–1). Identification in samples of the sources of yellow dye containing luteolin is currently proving difficult in scientific analyses. Quercitin found in one of a group of Chancay and Inka textiles studied by Wouters and Rosario-Chirinos, however, might be derived from *Alnus jorulensis*, an alder tolerant of high altitudes. In recent times, walnut has been an important source of dyestuff for a rich brown.

Paracas and early Nasca textiles and fabrics, in particular, are noted for their impressive range of colours. Lila O'Neale's study of early Nasca textiles demonstrated the relative frequencies of 190 different colour matches. She noted a tendency towards dark and rich colours. A preponderance of dark red and maroon is notable in textiles from the Arica area (fig. 3), and it is intriguing to note that languages belonging to the Jaqaru family, which includes the Aymara language spoken in the South-Central Andes, have specific colour terms for dark red.

SPINNING

Perhaps the earliest method for spinning yarns was rolling plant or camelid fibres over the thigh. The most common form of spinning in the Andes is by use of drop spindle, which might also be

FIGURE 3 Late pre-Inka carrying cloth from the Arica region with camelid fibre warp and weft. It is executed in stripes of warp-faced plain weave and three stripes of complementary-warp weave, and has weft-twining at the top and bottom of the textile. 36 x 47 cm

used supported in a little ceramic vessel (fig. 4). Spindle whorls have been widely excavated on the central coast of Peru from periods in which cotton became plentiful. By late pre-Inka times, workbaskets from coastal desert tombs were common accompaniments of the dead (fig. 5). These baskets contain fine wooden spindles and hanks of prepared yarns. The whorls were either ceramic, in bead-like shapes frequently decorated with textile-related designs, or tubular, made of sections of cane bearing pyroengraved designs. In the Atacama Desert, spindle whorls were rectangular in shape, and were finely carved from wood or bone.

FIGURE 5 Pre-Hispanic rectangular plaited workbasket with hinged lid containing spindles and other items. Probably from the central coast of Peru. L. 24 cm

Another technique for spinning involves nothing more than a straight stick. The spinner holds the stick horizontally and rotates it away from the body while drawing out the prepared fleece (llama or alpaca). To ply two strands together, the spinner rotates the stick towards the body. This technique has survived up to the present and the resulting yarns are used for plaiting into ropes.

Andean weavers use different yarns to perform specific functions. The warp must survive the tension of the loom and the friction caused by lowering one set of warp threads and

FIGURE 4 A woman carrying a spindle wound with yarn on a Nasca pottery jar, with a bridged spout, later sixth to seventh century AD. Her tunic has an applied band at the hem; the design might have been executed in tapestry or embroidered. H. 16.5 cm

raising another in order to insert the weft, which usually is more pliable. Generally speaking, yarns were and are plied from two or sometimes more strands to give them more stability. There are regional and chronological variations in the twist direction of the spinning and numbers of strands used in plying. Warp yarns have often been plied with a considerable degree of twist; they form kinks when not held under tension, as can be seen in the warp of the loom illustrated in fig. 6.

WARPING THE LOOM

In the Andes looms consist of different sticks which are held in place by the warp. This characteristic led the textile historian Agnes Geijer in *A history of textile art* (1979) to term such looms as examples of the 'most primitive loom'. This characterization is misleading, as it does not account for striking differences in technological approaches between Eurasia and the Andes. Junius B. Bird, author of pioneering work on Andean textile technology, warned against misjudging an Andean loom, as it looks deceptively simple.

There are two main means for tensioning such looms. One consists of attaching the upper loom bar to a fixed stake and the lower bar to a backstrap, which passes round the weaver's hips, enabling him or her to adjust the tension by leaning forwards and backwards. Alternatively the weaver drives four stakes into the ground and lashes the back bar to one pair and the front bar to

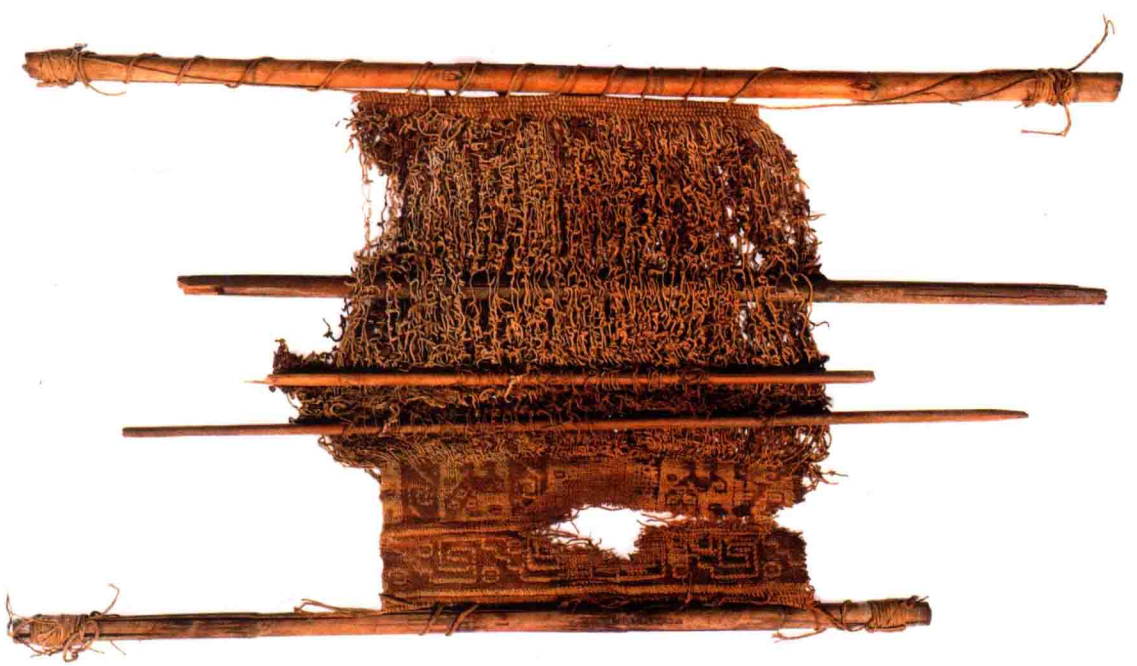

FIGURE 6 Late pre-Inka loom, perhaps from the central coast of Peru, set up to weave double cloth. One of the heddle rods is missing. Warp and weft are both cotton. 27 x 52 cm