4.4. THE USE OF *MESORIAS* TO HARVEST HULLED WHEAT BY STRIPPING: AN ANCIENT TOOL?

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Although the study of agricultural techniques is a well-developed field within anthropological studies and to some extent also in archaeology (White 1967), it is also true that, at least in the latter, attention has focused more on issues concerning soil preparation (terracing), irrigation or even crop processing than on the variability of harvest techniques existing in both the archaeological and the ethnographical record. Harvesting has been generally associated with the use of sickles and, with some exceptions (Anderson 1992; Ibañez *et al*. 2001; Peña-Chocarro 1996; 1999), little research has been done into alternative harvesting techniques.

One of the most striking alternative harvest methods in Europe is the use of the *mesorias*, an ancient implement still in use in mountain areas of northern Spain, in Asturias. The *mesorias* consist of two 50–cm long sticks (today often obtained from a broom handle), joined together at the upper part using a piece of leather or a string (Fig. 4.22). They are used to harvest spelt (and in the past also emmer) by stripping the ears off from the stem. The method, as practiced today, consists of several steps. First, farmers gather a bunch of ears between the two sticks and close them around the stems at some distance below the ear (Fig. 4.23). Next, the *mesorias* are pulled up (Fig. 4.24) to the base of the ear where the two sticks are tightly closed. Finally, the farmers keep pulling the *mesorias* up holding them tightly so the cereal ears are snapped off from the straw (Fig. 4.25), falling inside a large basket (*goxa*) that harvesters have next to them (Fig. 4.26), leaving the straw in the field for cutting later for further use as animal bedding or to be burnt to improve soil quality.

An important consideration relates to the type of cereals harvested with this method. Both emmer and spelt are hulled wheats, primitive species which are characterised by glume tenacity and the rachis' semi-fragility. In the wild cereals, rachis fragility allows the spike to shatter into segments when ripe, while in the domesticated species the rachis is tough and at maturity it remains intact. In both emmer and spelt, the rachis is semi-fragile and therefore it breaks easily when some pressure is applied as occurs during harvesting with *mesorias*.

The rarity of this method has drawn the attention of many researchers (Alvargonzález 1908; Bregadze 1982; Buxó i Capdevila 1989; Caro Baroja 1972; 1975; Dantín Cereceda 1941; González Llana 1889; Ibáñez *et al.* 2001; Menéndez Pidal 1993; Ortiz and Sigaut 1980; Peña-Chocarro 1996; 1999; Reigniez 2002b; 2003; Sigaut 1978; Stordeur and Anderson-Gerfaud 1985; Toffin 1983; Vavilov 1926) who have approached their study from various perspectives.

Some of these scholars reported the use of this type of harvesting implement in other parts of the world. Toffin (1983), for instance, described similar tools in Nepal. Made of bamboo or other woods hardened by fire, the *te-shing* or *tep-shing* were used by the Tamang, an indigenous ethnic group settled in central Nepal in the highlands of the Ankhu Khola river. Although no specific references are made to the species involved (wheat and barley are mentioned), this group also uses sickles to collect other cereals, as do many other groups in the region. In any case, the description made of the operation is very much like that in Asturias. Toffin (1983) suggests that the survival of this technique may

Fig. 4.22. *Mesorias*, a pair of wooden sticks joined together by a piece of leather. Image: L. Peña-Chocarro.

Fig. 4.23. and 4.24. Farmers using the *mesorias*. The two sticks are closed around a bunch of stems just below spikes, held tightly with both hands and then pulled upwards. Photos: L. Peña-Chocarro, P. C. Anderson.

be related to past traditions that have continued to exist due to cultural and ethnic factors. He indicates that this tradition has been maintained in isolated areas away from southern influences, while everywhere else the sickle dominates the harvesting techniques used. A possible explanation for the use of this implement may be related to the type of cereal harvested, perhaps a wild species or a semi-brittle domesticate, but no information is available regarding this aspect.

Further west, in Georgia, researchers (Bregazde 1982; Menéndez Pidal 1993; Reigniez 2002; 2003; Sigaut 1978; Steensberg 1943), have reported the use of a similar tool named, according to different authors, šamkvi, šankvi, šnakvi, *shakvi* or *chamkvi* and associated with different wheat species (emmer and combinations of *Triticum timopheevi* Zhuk., *T. palaeocolchicum* Menabde and *T. macha* Dekapr. and Menabde). Very little is known about the origin of this implement.

The analyses of Classical texts and in particular the descriptions of different implements may provide some information about the existence of similar tools in the past. Various authors (Plautus, Servius,

Fig. 4.25. Cereal ears (spikes) are snapped off at the base of the ear while the ear falls into a basket. Image: P. C. Anderson.

Pliny, Columella) mentioned an implement called *mergae* although only Pliny and Columella described their use. In his *Naturalis Historia* (18. 296 after White 1967) Pliny says that 'elsewhere the stalks are cut off at mid-height with the sickle and the ears stripped off between two forks'. Columella instead points to a particular harvesting technique 'Many gather the heads only with forks, and others with combs, an operation which is very easy in a thin crop, but very difficult in a thick one.' (Columella, *De Re Rustica*, 2. 20.3 after White 1967). Attention has been drawn (White 1967) to the difficulties in properly identifying the tool described by Pliny. Two different methods (cutting, and stripping with the so-called *mergae*) seem to be involved, but it is uncertain whether the text refers to an implement like the Asturian *mesorias*. The way the *mergae* seem to operate on cut plants does not match the way modern *mesorias* work. The latter strip cereal ears off while the plant is still attached to the earth, as this facilitates the stripping movement.

Columella's description of the *mergae* as 'forks' and Pliny's account of their use to remove ears from culms which have already been cut bring to mind an implement similar to the one retrieved from Ganj Dareh Tepe in Iran (Fig. 4.3; Stordeur and Anderson-Gerfaud 1985; Anderson 2013) made from ovicaprid scapulae. In addition, Columella's *pectines* (combs) seem to be also present amongst certain communities in Nepal, associated with barley (Toffin 1983), although such implements have not been documented in Spain.

In summary, the available data does not support a match between the *mergae* and the Asturian *mesorias*. In addition, it is clear that already in Classical times alternative harvesting methods were in use, although it remains difficult to correlate the ancient tools with possible modern counterparts. In any case, the *mesorias* remain in use as an alternative to more familiar sickle harvesting of grain, and stripping very likely was practiced in various forms in the past.

Fig. 4.26. Detail of basket (*goxa*). Image: L. Peña-Chocarro.