

BRONZE AGE SICKLES IN DIVERSE ROLES

ESZTER FEJÉR¹

Hungarian Archaeology Vol. 9 (2020), Issue 4, pp. 23–30. doi: <https://doi.org/10.36338/ha.2020.4.1>

Bronze sickles are among the most numerous types of artefacts discovered in Late Bronze Age assemblages in Europe, and they have been found in particularly large numbers in the Carpathian Basin. Since their form has barely changed during the last few thousand years and they are generally regarded as having a very ordinary function, for a long time they had failed to spark research interest. Nevertheless, detailed analysis of their find contexts and condition, as well as their comparison with historical, anthropological, and ethnographic observations reveal that they may have had diverse meanings, a greater significance than previously thought, and a special value for the people of the Bronze Age.

THE ORIGINS OF SICKLES

The earliest ancestors of modern sickles are as old as the dawn of agriculture, they were contemporary with the first cultivated plants, although it should be noted that wild cereals had been gathered and harvested even before this time. The first flint implements which were applied for harvesting cereals, as use-wear analyses suggest, have been found in the Near East and can be dated before the 10th millennium BC (ANDERSON 1999). The oldest harvesting tools in Europe are known from the 6th millennium BC. Most of these implements consist of one or more small or large flints, which were attached to a wooden handle. These types of instruments were in use from the Neolithic to the Late Bronze Age, for a while in parallel with the metal blades (BEHM-BLANCKE 1963; HORVÁTH, KOZÁK & PETŐ 2001, 199–200; PALOMO et al. 2011). In contrast to the flint blades, no analytical methods are available to determine whether metal blades were in fact used for harvesting cereals. The term ‘sickle’ refers to all those curved artefacts which, on the basis of their shape, seem to have functioned as handheld cutting implements.

The first bronze sickles, i.e., bronze curved blades, appeared in the Carpathian Basin during the Middle Bronze Age (first half of the 2nd millennium BC), and thereafter they were being produced and used in an almost unchanged shape for nearly a thousand years. Several types of sickles are known from different regions of Bronze Age Europe; the main difference between them lies in the shape of their base, i.e., in their hafting techniques (Fig. 1). In the territory of Hungary, two main types were cast: knobbed and tanged sickles. The knobbed sickle consists almost only of a blade, at the base of which a vertical knob assists to secure the handle, made of organic material (Fig. 2b). The tanged sickle consists of a blade and an

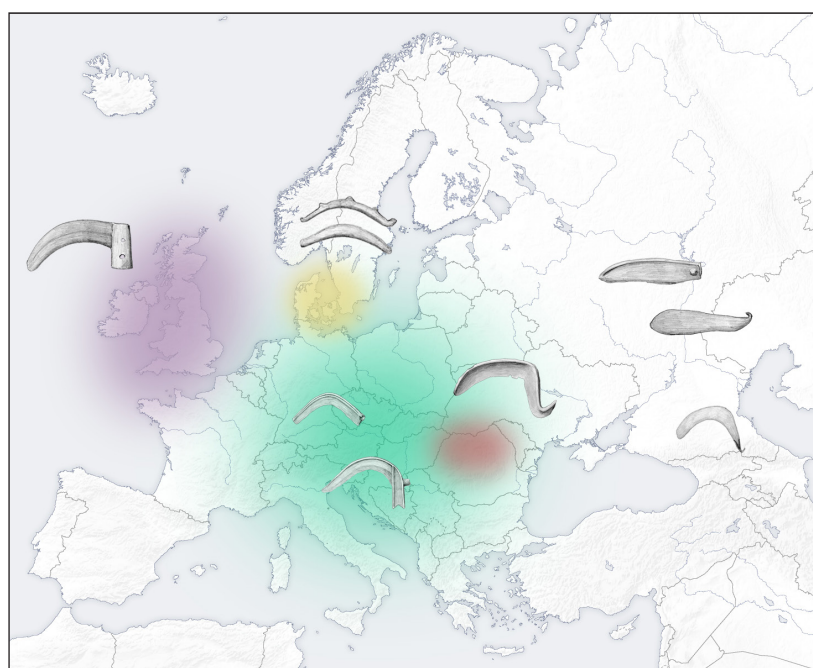


Fig. 1. The most important bronze sickle types in Europe (drawing by Eszter Fejér)

¹ ELTE Faculty of Humanity, Institute of Archaeological Sciences. E-mail: feszter18@gmail.com



Fig. 2. Bronze age tanged and knobbed sickles (Törökkoppány, Szikszó, Hungary) (photo by Eszter Fejér; RRM, Kaposvár, inv. no. 3927; HOM, Miskolc, inv. no. 66.14.4)

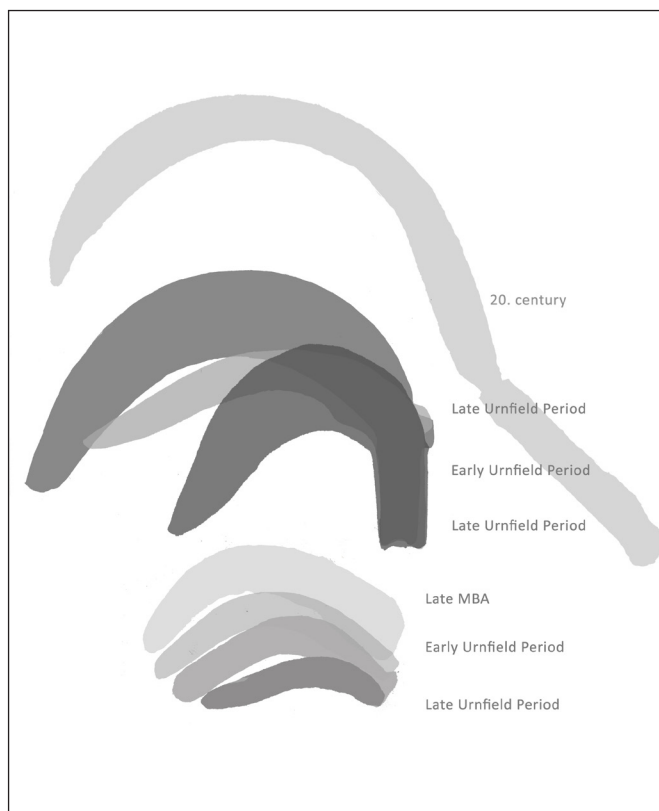


Fig. 3. The size of the bronze sickles during different periods (drawing by Eszter Fejér)

elongated tang which joined the blade almost at a right angle and made a different way of hafting possible (Fig. 2a). Although knobbed sickles and tanged sickles are often found together, their distributions slightly differ in the Carpathian Basin: the tanged sickles are known from the whole area, the knobbed sickles, however, are almost completely absent in Transdanubia and the adjacent south-western regions. The blades have an average width of 10–13 cm in case of the knobbed sickles and 15–18 cm in case of the tanged ones; however, toward the end of the Bronze Age, their size clearly decreased, while much larger and unique bronze sickles of experimental character also appeared in this later period.

Bronze blades began to be replaced by iron blades in the Early Iron Age. Iron sickle types that had already been developed by the Late Iron Age seem to have served as prototypes for harvesting tools of the upcoming two thousand years. These Late Iron Age sickles hardly differ in their shape and hafting methods from today's implements (cf. MÜLLER 1982; STEENBERG 1943, 133–247) (Fig. 3).

HIDDEN TREASURES, ENIGMATIC SYMBOL SYSTEM?

Bronze sickles occupy a prominent position among Bronze Age metal objects due to their enormous quantity. Currently, more than 12,000 bronze sickles are known from the Carpathian Basin, which were found almost exclusively in hidden treasures, in hoards. The reasons and circumstances of assembling and depositing such hoards may have been manifold, and several explanations can be accepted (for a summary, see e.g. HANSEN 2013; V. SZABÓ 2019). Sickles were placed as grave goods in burials only in the area of the Tumulus, Piliny and Kyjatice cultures. At settlements, they appear rarely and mostly as scattered finds, about the primary context of which no information is available. At least two-thirds of the known bronze hoards of the region contain sickles and they were popular hoard components in all periods, although their ratio among the deposited objects varies somewhat by periods and regions. The most spectacular ones are the Transdanubian assemblages of the Early Urnfield Period (13th–11th centuries BC), which sometimes include up to hundreds of bronze sickles (Fig. 4). The sickles buried in these deposits were partly sharpened and partly used, and most

of them was only little worn. However, as a typical phenomenon of the period, they were also often violently destructed, bent and broken. In contrast, in later periods (Late Urnfield Period, 11th–10th centuries BC), sickles were deposited in smaller numbers and often unused, in a freshly cast, intact condition (cf. FEJÉR 2017).

The sickles of the Early Urnfield Period are remarkable not only because of their large numbers in hoards, but also because of the plastic rib marks on their surface. In Central Europe, plastic ribs can be observed mainly on knobbed sickles, the common type of the region; in the Carpathian Basin, however, one finds them mostly on tanged sickles, arranged in different patterns. While the ribs running at the top (at the back) of the blade, as well as at the edges and sometimes in the middle of the tang, can be explained by practical reasons (e.g. ensuring handle stability), it is difficult to find a functional explanation for the more complex arrangements. Moreover, it can be assumed that these ribs made both the casting and the hafting of the object more difficult. Since the handle of the sickle made of organic material covered this part during use, a pure aesthetic role of the ribs can also be questioned. Numerous variations of patterns assembled of different rib elements are known (Fig. 5), yet the vast majority of sickles represent individually modified versions of less than ten combinations (SOMMERFELD 1994; WANZEK 2002; JAHN 2013). The interpretation of the patterns is still one of the greatest mysteries of the Late Bronze Age. Similar signs are hardly ever found on objects of other kinds, only the plastic ribs of socketed axes may resemble them. Several researchers have tried to “decode” the patterns, interpreting them as a system of signs, but there is no generally accepted explanation that would give an unequivocal answer to the question why ribs were canonized elements of bronze sickles over a period of approximately 200 years.

HARVESTING IMPLEMENTS, WEAPONS, OBJECTS WITH MAGICAL POWER

Considering the function of the bronze objects called sickles, one can rely neither on natural scientific methods nor on contemporary written sources, but information can be gained from technological observations (production and use-wear marks), as well as from ethnographic, historical and anthropological analogies.

The metal artefacts discussed here are identified as harvesting tools essentially on the basis of their form, nevertheless their primary agricultural function can hardly be questioned. Metal blades have certainly been used instead of (and partly in addition to) flint sickles to harvest grain and other crops since the Late Bronze Age, but they provide little data on the presumably regionally and temporally varied, contemporaneous harvesting techniques. The date of harvest, the height of the cut and the harvested species can be reconstructed only from paleobotanical data; however, this information is only locally valid (GYULAI 2010; BOUBY 2003; BERANOVÁ 1991; 1993). The exact technique of using bronze sickles is not known, since handles belonging



Fig. 4. Part of a hoard from Bakóca, Hungary, containing more than 60 sickles (photo by Eszter Fejér; JPM, Pécs, (inv. no. 69.22.1-13))

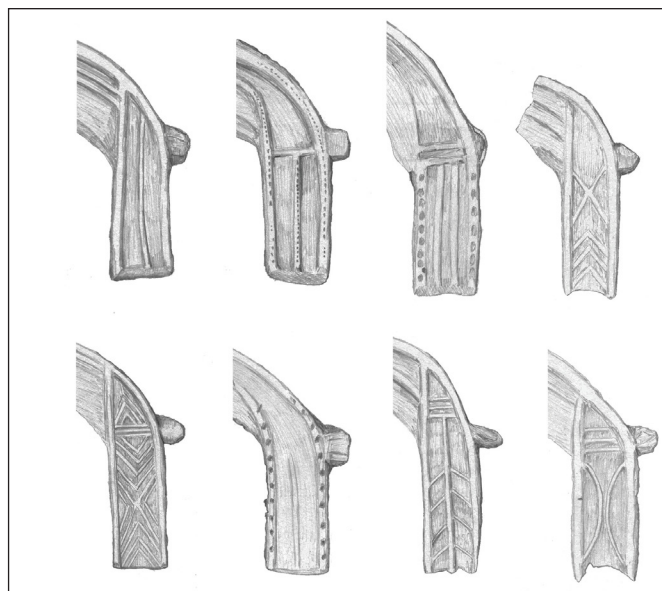


Fig. 5. Various rib patterns on tanged sickles (Balatonkiliti, Öreglak, Hungary) (drawing by Eszter Fejér)

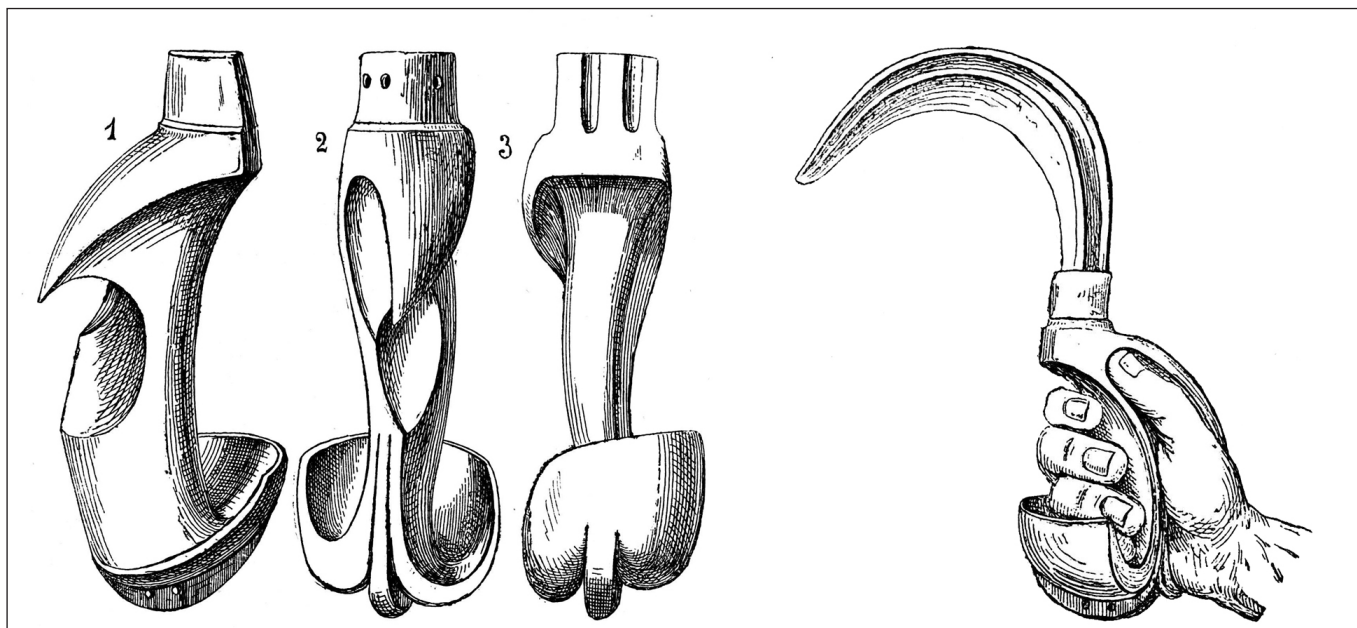


Fig. 6. Wooden handle of a Bronze Age (tanged) sickle, Mörigen (Switzerland) (based on Keller 1873)

to metal blades have been very rarely found. Only a few Western European finds testify what they might have looked like: the blades were inserted into 15–20 cm long, mostly ergonomically designed wooden hafts (Fig. 6) (BRYSAERT 1998; EGLOFF 1984; PRIMAS 1986, 195–196). The tendency that the size of the bronze sickles was reduced overall in Europe at the end of the Late Bronze Age is perhaps the only observation associated with these artefacts that may refer to agricultural changes, namely the appearance of denser sowing in that period (JAHN 2013, 86–87; SCHLICHTERLE 1992, 37), although there may be other explanations for the size reduction, too.

Since no other tool with a curved blade suitable for cutting is known from the Late Bronze Age, it is possible to attribute a universal cutting function to these objects. Sickles could have been used not only for harvesting but also for other agricultural and household activities, if necessary. Among the ethnographic tools of grape pruning, brunch cutting, and wood and leather processing, one often finds objects with blades of similar shape (e.g., TAKÁCS 1967; EÖRY 1999) whose function may have been fulfilled in the Late Bronze Age by bronze sickles. The assumption that different types of sickles were used for specialised agricultural tasks cannot be confirmed before the Iron Age.

In addition to its agricultural function, sickles could be used as weapons too, as several medieval and early modern sources attest to it. A fencing handbook, *De arte athletica*, compiled by a 16th-century fencing master, Paulus Hector Mair, presents a number of martial arts techniques known in that era, describing and illustrating various weapon types and their possible ways of use. One chapter of the work is dedicated to the combat with sickles (Paulus Hector Mair, *De arte athletica*, Volume I, Chapter G) (Fig. 7). Although sickles have probably never been characterised primarily as weapons, we have seen many examples of their *ad hoc* applications in violent situations throughout history. It is a common idea that during the peasant wars in Europe, farmers often armed themselves with their agricultural tools such as sickles when required (DEMMIN 1869, 447–450; GERÉB 1950, 132, 142). From the Far East, where sickles and sickle-shaped cutting tools have traditionally also belonged to the farmer's toolkit, there are many analogies to their role in peasants' armaments, and remarkably, they still often have similar functions there today (e.g., *kama* and *kusarigama* in Japan, *karambit* in Malaysia). Based on the above-mentioned examples, it cannot be ruled out that Bronze Age sickles may have been used in combat situations, although no clear evidence of this (such as adequate injuries on the blades) has been observed while examining thousands of finds in Hungary.

Written sources that are the closest in space and time to the Bronze Age of the Carpathian Basin and deal with the function of sickles, are known from the ancient Greek and Roman world. Sickles rarely appear in



Fig. 7. Combat with sickles in the 16th century, illustration by Paulus Hector Mair (Paulus Hector Mair, *De arte athletica* (16th century). Cod. icon. 393, Bayerische Staatsbibliothek, München. http://daten.digital-e-sammlungen.de/bsb00006570/image_459 http://daten.digital-e-sammlungen.de/bsb00006570/image_467 Downloaded: 03 Nov 2020.)

ancient Greek sources, but if they do, they have special roles in mythological stories: they were used by gods or mythical heroes to defeat fearsome creatures and monsters. Cronus castrated his father, Uranus with a sickle which he received from his mother, Gaia, and then took control of the world (Hesiod, *Theogony* 162, 179). According to another source, Perseus was also helped by a divine sickle: he cut off the head of the monstrous Medusa with the help of a gift from Athena (Apollodorus, *Bibliotheca* 2.4.2) (Fig. 8). In addition to these famous stories, one can find sickles also in other myths, usually as weapons with special power (e.g., Euripides, *Ion* 192, Ovidius, *Metamorphoses* 1,717). Some texts mention them not as weapons but in a magical context: several authors described that the famous ancient sorceress Medea, who lived on the eastern coast of the Black Sea, used a bronze sickle at night to cut certain plants, while in Celtic mythology, according to Pliny the Elder, druids cut mistletoe with a golden sickle (KRON 1998, 213; Pliny the Elder, *Naturalis Historia* XVI.95).

Sickles rarely occur as prominent objects in the archaeological material of ancient Hellas or the Roman world; however, their contexts sometimes points to an unusual, ritual role which is beyond the agricultural sphere. For example, in several sacred precincts in ancient Greece (e.g., in the Heraion of Perachora, or in the Artemision of Delos), sickles have been deposited from the 8th century BC (SCHIERING 1968, 157–158; KRON 1998, 195–201). In the sanctuary of Artemis Orthia in Sparta, from the 4th century BC, the young winners of one of the contests held there were rewarded with iron sickles which they offered to the goddess by fixing them to stone steles (WOODWARD 1929).

Although these sporadic ancient examples do not prove that sickles were considered as objects of magical potential in Bronze or Iron Age Europe, they suggest that their symbolic significance may have been greater than one would think in the 21st century. In prehistoric times, agricultural activities were presumably much more ritualized, and in contrast to modern concepts, their religious, sacred meaning and their presumed connection to supernatural powers may have been more pronounced during that time. Even in the 20th century, sowing and harvesting, as well as the implements of these activities were – and to some extent, still are – connected to various beliefs and popular customs. To



Fig. 8. Perseus (left) with a sickle fleeing after cutting off Medusa's head (Athenian red-figure hydria, around 460 BC) (© The Trustees of the British Museum; British Museum, London. 1873, 0820.352)

gain a better understanding of the reasons why Bronze Age sickles were deposited in large quantities or in pre-used condition, and why they were equipped with complex ribbed patterns, symbolic meanings and functions that were once associated with these artefacts have to be taken into consideration too.

ACKNOWLEDGMENTS

This paper is based on the results of a PhD thesis submitted at the Prehistoric Institute of the Freie Universität Berlin (FEJÉR 2020). The research was funded between 2014 and 2017 by the Elsa Neumann Stipendium des Landes Berlin.

RECOMMENDED LITERATURE

Cappers, R. T. J., Neef, R., Bekker, R. M., Fantone, F. & Okur, Y. (2016). *Digital Atlas of Agricultural Practices and Food Processing*. Groningen Archaeological Studies 30. Eelde: Barkhuis, Groningen University Library.

Schmidt, H. (1904). Der Bronzesichelfund von Oberthau, Kr. Merseburg. *Zeitschrift für Ethnologie* 36 (III–IV), 416–452.

Selmezi Kovács, A. (2006). *A kézi aratás járulékos eszközei. The Auxiliary Implements of Manual Harvesting*. Catalogi Musei Ethnographiae 11. Budapest: Néprajzi Múzeum.

Steensberg, A. (1943). *Ancient Harvesting Implements: A Study in Archaeology and Human Geography*. Nationalmuseets skrifter 1. København: Gyldendalske Boghandel, Nordisk forlag.

BIBLIOGRAPHY

Anderson, P. C. (1999). Experimental Cultivation, Harvest, and Threshing of Wild Cereals. In P. C. Anderson (ed.), *Prehistory of Agriculture. New experimental and Ethnographic Approaches* (pp. 118–144). Monograph 40. Los Angeles: Institute of Archaeology, University of California, Los Angeles.

Behm-Blancke, G. (1963). Bandkeramische Erntegeräte. *Alt-Thüringen* 6, 104–175.

Beranová, M. (1991). Archäologie und Botanik aus der Sicht des Archäologen (Anbau von Kulturpflanzen). In E. Hajnalová (ed.), *Palaeoethnobotany and Archaeology. International Work-Group for Palaeoethnobotany 8th Symposium, Nitra–Nové Vozokany 1989* (pp. 37–50). Acta Interdisciplinaria Archaeologica VII. Nitra: Archaeological Institute of the Slovak Academy of Sciences.

Beranová, M. (1993). Versuche zur vorgeschichtlichen und frühmittelalterlichen Landwirtschaft. *Památky Archeologické* 84 (1), 97–119.

Bouby, L. (2003). Harvesting cereals with bronze sickles in Bronze Age Southern France. *Antiquity Project Gallery* 77 (296), <http://www.antiquity.ac.uk/projgall/bouby296/> (Last accessed 03.11.2020.)

Brysbaert, A. (1998). A Late Bronze Age sickle from Shinewater Park: The treatment of a waterlogged composite. *Journal of Conservation and Museum Studies* 4 (1), 1–5. <http://doi.org/10.5334/jcms.4981>

Demmin, A. (1869). *Die Kriegswaffen in ihrer historischen Entwicklung von der Steinzeit bis zur Erfindung des Zündnadelgewehrs: ein Handbuch der Waffenkunde*. Leipzig: E. A. Seemann.

- Egloff, M. (1984). A l'aube du „design”: les manches de faucilles du Bronze final. *Helvetica Archaeologica* 15 (57–60), 51–66.
- Eöry, B. (1999). A tokosbalta, mint sokrétű munkaeszköz. Das Tüllenbeil, als vielseitiges Arbeitsgerät. *Savaria* 24 (3), 437–446.
- Fejér, E. (2017). Technologische Angaben zur Deutung der Sicheln in spätbronzezeitlichen Horten. In G. Kulcsár, G. V. Szabó, V. Kiss & G. Váczi (eds.), *State of Hungarian Bronze Age Research. Proceedings of the conference held between 17th and 18th of December 2014* (pp. 337–343). *Ősrégészeti Tanulmányok / Prehistoric Studies* 2. Budapest: Institute of Archaeology, Research Centre for the Humanities, Hungarian Academy of Sciences – Institute of Archaeological Sciences, Faculty of Humanities, Eötvös Loránd University – *Ősrégészeti Társaság / Prehistoric Society*.
- Fejér, E. (2020). Die Sicheln im Kulturinventar der Bronzezeit (PhD thesis). Freie Universität Berlin, Fachbereich Geschichts- und Kulturwissenschaften, Berlin.
- Geréb, L. (1950). *A magyar parasztháborúk irodalma 1437–1514* [Literature about the Hungarian peasant wars, 1437–1514]. Budapest: Hungária Könyvkiadó.
- Gyulai, F. (2010). *Archaeobotany in Hungary*. Archaeolingua Series Maior 21. Budapest: Archaeolingua.
- Hansen, S. (2013). Bronzezeitliche Deponierungen in Europa nördlich der Alpen. Weihgaben ohne Tempel. In I. Gerlach & D. Raue (eds.), *Sanktuar und Ritual. Heilige Plätze im archäologischen Befund* (pp. 371–387). Menschen – Kulturen – Traditionen 10. Rahden, Westf.: Leidorf.
- Horváth, T., Kozák, M. & Pető, A. (2001). Adatok a bronzkori kőeszközök kutatásához (Százhalombatta–Földvár bronzkori rétegeinek kőanyaga). Factual Information for Researching Bronze Age Stone Instruments (The Stone Find of the Százhalombatta–Földvár Bronze Age Stratum). In J. Dani, Zs. Hajdú, E. Gy. & L. Selmeczi (eds.), *ΜΩΜΟΣ I. „Fiatal Őskoros Kutatók” I. Összejövetelének konferenciakötete. Debrecen 1997. november 10–13* (pp. 199–215). Debrecen: Debreceni Déri Múzeum Kiadványai.
- Jahn, C. (2013). *Symbolgut Sichel. Studien zur Funktion spätbronzezeitlicher Griffzungensicheln in Depotfunden*. Universitätsforschungen zur Prähistorischen Archäologie 236. Bonn, Habelt.
- Keller, F. (1873). Handgriff der Bronzesichel. *Anzeiger für schweizerische Altertumskunde* 6 (2), 422–424.
- Kron, U. (1998). Sickles in Greek Sanctuaries: Votives and Cultic Instruments. In R. Hägg (ed.), *Ancient Greek Cult Practice from the Archaeological Evidence. Proceedings of the Fourth International Seminar on Ancient Greek Cult, organised by the Swedish Institute at Athens, 22–24 October 1993* (pp. 187–215). Stockholm: Åströms Förlag.
- Müller, R. (1982). *A mezőgazdasági vaseszközök fejlődése Magyarországon a késővaszkortól a törökkor végéig* [The development of agricultural iron tools in Hungary from the Late Iron Age to the end of the Ottoman Turkish Period]. Zalai Gyűjtemény 19. Zalaegerszeg: Zala Megyei Levéltár.
- Palomo, A., Gibaja, J. F., Piqué, R., Bosch, A., Chinchilla, J. & Tarrús, J. (2011). Harvesting cereals and other plants in Neolithic Iberia: The assemblage from the lake settlement at La Draga. *Antiquity* 85, 759–771. <https://doi.org/10.1017/S0003598X00068290>

- Primas, M. (1986). *Die Sichel in Mitteleuropa I* (Österreich, Schweiz, Süddeutschland). Prähistorische Bronzefunde XVIII/2. München: Beck.
- Schiering, W. (1968). Landwirtschaftliche Geräte. In W. Richter (ed.), *Die Landwirtschaft im homerischen Zeitalter* (pp. 147–158). Archaeologia Homerica 2. Göttingen: Vandenhoeck & Ruprecht.
- Schlichtherle, H. (1992). Jungsteinzeitliche Erntegeräte am Bodensee. *Plattform* 1, 24–44.
- Sommerfeld, C. (1994). *Gerätegeld Sichel. Studien zur monetären Struktur bronzezeitlicher Horte im nördlichen Mitteleuropa*. Vorgeschichtliche Forschungen 19. Berlin, New York: de Gruyter.
- Steensberg, A. (1943). *Ancient Harvesting Implements: A Study in Archaeology and Human Geography*. Nationalmuseets skrifter 1. København: Gyldendalske Boghandel, Nordisk forlag.
- Takács, L. (1967). Kaszasarlók Magyarországon. Sensensicheln in Ungarn. *Ethnographia* 78 (1), 1–21.
- V. Szabó, G. (2019). *Bronze Age Treasures in Hungary. In Search of Hidden Weapons, Tools and Jewellery*. Hereditas Archaeologica Hungariae 3. Budapest: Archaeolingua.
- Wanzek, B. (2002). Zur Syntax der Muster auf Griffzungensicheln im bronzezeitlichen Südosteuropa. *European Archaeology – Online*, http://www.archaeology.ro/pagini/revista_EA_9.html (Last accessed 03.11.2020.)
- Woodward, A. M. (1929). Inscriptions. In R. M. Dawkins (ed.), *The Sanctuary of Artemis Orthia at Sparta* (pp. 285–377). The Society for the Promotion of Hellenic Studies, Supplementary paper 5. London: MacMillan & Co.