

- Aiello LC, Key C (2002) Energetic consequences of being a *Homo erectus* female. *Am J Hum Biol* 14:551–565. <https://doi.org/10.1002/ajhb.10069>
- Aiello LC, Wheeler P (1995) The Expensive-Tissue Hypothesis: The Brain and the Digestive System in Human and Primate Evolution. *Curr Anthropol* 36:199–221. <https://www.jstor.org/stable/2744104>
- Anderberg A-L (1994) Atlas of Seeds and small fruits of Northwest-European plant species (Sweden, Norway, Denmark, East Fennoscandia and Iceland) with morphological descriptions. Swedish Natural Science Research Council, Stockholm
- Anderson PC (2003) Observations on the threshing sledge and its products in ancient and present day Mesopotamia. In: Anderson PC, Scott-Cummings L, Schippers TK, Simonel B (eds) *La traitement des récoltes. Un regard sur la diversité du Néolithique au présent. Actes des XXIII^e rencontres internationales d'archéologie et d'histoire d'Antibes*. Editions ADPCA, Antibes, pp 417–438
- Anderson PC (2006) Premiers tribulums, premières tractions animales au Proche-Orient vers 8000–7500 BP? In: Pétrequin P, Arbogast R-M, Pétrequin A-M, et al. (eds) *Premiers chariots, premiers araires : La diffusion de la traction animale en Europe pendant les IV^e et II^e millénaires avant notre ère*. CNRS Editions, Le Frasnais, pp 299–316
- Anderson PC, Georges J-M, Vargiolu R, Zahouani H (2006) Insights from a tribological analysis of the tribulum. *J Arch Sci* 33:1559–1568. <https://doi.org/10.1016/j.jas.2006.02.011>
- Andresen ST, Karg S (2011) Retting pits for textile fibre plants at Danish prehistoric sites dated between 800 B.C. and A.D. 1050. *Veget Hist Archaeobot* 20:517–526. <https://doi.org/10.1007/s00334-011-0324-0>
- Asouti E, Hather J (2001) Charcoal analysis and the reconstruction of ancient woodland vegetation in the Konya Basin, south-central Anatolia, Turkey: results from the Neolithic site of Çatalhöyük East. *Veget Hist Archaeobot* 10:23–32.
- Badal-Garcia E (1992) L'anthracologie préhistorique: à propos de certains problèmes méthodologiques. *Bull Soc Bot Fr* 139:167–189. <https://doi.org/10.1080/01811789.1992.10827098>
- Balabán K (1955) *Nauka o dřevě: Anatomie dřeva*. Státní zemědělské nakladatelství, Praha
- Banning EB (2020) Archaeological Plant Remains. In: Banning EB (ed) *The Archaeologist's Laboratory. The Analysis of Archaeological Evidence*. Springer International Publishing, Cham, pp 267–291
- Barker G (1975) To sieve or not to sieve. *Antiquity* 49:61–63
- Barton H, Matthews PJ (2006) Taphonomy. In: Torrence R, Barton H (eds) *Ancient Starch Research*. Routledge, New York (NY), pp 75–94
- Barton RNE, Currant AP, Fernandez-Jalvo Y, et al (1999) Gibraltar Neanderthals and results of recent excavations in Gorham's, Vanguard and Ibex Caves. *Antiquity* 73:13–23.
- Beijerinck W (1976) *Zadenatlas der Nederlandsche flora*. Backhuys & Meesters, Amsterdam
- Beneš J, Pokorný P (eds) (2008) *Bioarcheologie v České republice*, 1st edn. Jihočeská univerzita, Archeologický ústav AV ČR, České Budějovice, Praha
- Beneš J, Pokorná A, Starcová M, et al (in print) Archaeobotany in Czechia and Beyond. The Past and Present of the Discipline. Nakladatelství Jihočeské univerzity, České Budějovice
- Bergfjord C, Holst B (2010) A procedure for identifying textile bast fibres using microscopy: Flax, nettle/ramie, hemp and jute. *Ultramicroscopy* 110:1192–1197. <https://doi.org/10.1016/j.ultra-mic.2010.04.014>
- Bergfjord C, Karg S, Rast-Eicher A, et al (2010) Comment on “30,000-Year-Old Wild Flax Fibers”. *Science* 328:1634. <https://doi.org/10.1126/science.1186345>
- Bergfjord C, Mannering U, Frei KM, et al (2012) Nettle as a distinct Bronze Age textile plant. *Sci Rep* 2:art.no.664. <https://doi.org/10.1038/srep00664>
- Berggren G (1969) Atlas of Seeds and small fruits of Northwest-European plant species (Sweden, Norway, Denmark, East Fennoscandia and Iceland) with morphological descriptions. Swedish Natural Science Research Council, Stockholm
- Berggren G (1981) Atlas of Seeds and small fruits of Northwest-European plant species (Sweden, Norway, Denmark, East Fennoscandia and Iceland) with morphological descriptions. Swedish Natural Science Research Council, Stockholm

- Boardman S, Jones G (1990) Experiments on the effects of charring on cereal plant components. *J Arch Sci* 17:1–11. [https://doi.org/10.1016/0305-4403\(90\)90012-T](https://doi.org/10.1016/0305-4403(90)90012-T)
- Bodner CC, Rowlett RM (1980) Separation of Bone, Charcoal, and Seeds by Chemical Flotation. *Am Antiq* 45:110–116.
- Bojňanský V, Fargašová A (2007) Atlas of Seeds and Fruits of Central and East-European Flora: The Carpathian Mountains Region. Springer, Dordrecht
- Bridson D, Forman L (eds) (1998) The Herbarium Handbook, 3rd edn. Royal Botanic Gardens, Kew
- Cappers RTJ, Bekker RM, Jans JEA (2012) Digitale zadenatlas van Nederland / Digital Seed Atlas of the Netherlands, 2nd edn. Barkhuis, University of Groningen University Library, Groningen
- Carmody RN, Wrangham RW (2009) The energetic significance of cooking. *J Hum Evol* 57:379–391. <https://doi.org/10.1016/j.jhevol.2009.02.011>
- Carnelli AL, Theurillat J-P, Madella M (2004) Phytolith types and type-frequencies in subalpine–alpine plant species of the European Alps. *Rev Palaeobot Palynol* 129:39–65. <https://doi.org/10.1016/j.revpalbo.2003.11.002>
- Charles M, Crowther A, Ertug F, et al (2009) Archaeobotanical Online Tutorial. <https://sites.google.com/sheffield.ac.uk/archaeobotany/>. Accessed 3 Feb 2022
- Charles M, Forster E, Wallace M, Jones G (2015) “Nor ever lightning char thy grain”: establishing archaeologically relevant charring conditions and their effect on glume wheat grain morphology. *Sci Technol Archaeol Res* 1:1–6. <https://doi.org/10.1179/2054892315Y.00000000008>
- Chave KE (1984) Physics and Chemistry of Biomineralization. *Annu Rev Earth Planet Sci* 12:293–305. <https://www.annualreviews.org/doi/10.1146/annurev.ea.12.050184.001453>
- Cherry JF (1975) Efficient soil searching: Some comments. *Antiquity* 49:217–219
- Chojacki AJS, Gale MD, Bayliss MW (1986) The Number and Sizes of Starch Granules in the Wheat Endosperm, and their Association with Grain Weight. *Ann Bot* 58:819–831. <https://doi.org/10.1093/oxfordjournals.aob.a087264>
- Cook JG (1968) Handbook of Textile Fibres. Mellow Publishing Co Ltd, Watford
- Crawford GW (1983) Palaeoethnobotany of the Kameda Penninsula Jomon. Museum of Anthropology, University of Michigan, Ann Arbor (MI)
- Crowther A (2009) Starches. In: Charles M, Crowther A, Ertug F, et al (eds) Archaeobotanical Online Tutorial. <https://sites.google.com/sheffield.ac.uk/archaeobotany/starch>. Accessed 17 Feb 2022
- Danielisová A, Hajnalová M (2014) Oppida and agricultural production – state of the art and prospects. Case study from Staré Hradisko oppidum (Czech Republic). In: Hornung S (ed) Produktion – Distribution – Ökonomie. Siedlungs- und Wirtschaftsmuster der Latènezeit. Akten des internationalen Kolloquiums in Otzenhausen, 28.–30. Oktober 2011. Rudolf Habelt, Bonn, pp 407–428
- Darwin C (1868) The Variation in Animals and Plants under Domestication, 1st edn. John Murray, London
- Davis MB, Faegri K (1967) Forest tree pollen in south Swedish peat bog deposits, by L. von Post (translation). *Pollen Spores* 9:375–401
- Del Puerto L, Bracco R, Inda H, et al (2013) Assessing links between late Holocene climate change and paleolimnological development of Peña Lagoon using opal phytoliths, physical, and geochemical proxies. *Quaternary International* 287:89–100. <https://doi.org/10.1016/j.quaint.2011.11.026>
- Dennell RW (1974) Botanical evidence for prehistoric crop processing activities. *J Arch Sci* 1:275–284. [https://doi.org/10.1016/0305-4403\(74\)90027-2](https://doi.org/10.1016/0305-4403(74)90027-2)
- Dennell RW (1976) The economic importance of plant remains represented on archaeological sites. *J Arch Sci* 3:229–247. [https://doi.org/10.1016/0305-4403\(76\)90057-1](https://doi.org/10.1016/0305-4403(76)90057-1)
- Dickson JH, Oeggl KD, Kofler W, et al (2019) Seventy-five mosses and liverworts found frozen with the late Neolithic Tyrolean Iceman: Origins, taphonomy and the Iceman’s last journey. *PLOS ONE* 14:e0223752. <https://doi.org/10.1371/journal.pone.0223752>
- Dimbleby GW (1968) Plants and Archaeology, 1st edn. Humanities Press, Inc., London
- Divišová M, Šída P (2015) Plant Use in the Mesolithic Period. Archaeobotanical Data from the Czech Republic in a European Context – a Review. *Interdiscip Archaeol* 6: 95–106. <https://doi.org/10.24916/iansa.2015.1.7>
- Dostál J, Červenka M (1983) Velký klíč na určování vyšších rostlin I, 1st edn. Slovenské pedagogické nakladatelstvo, Bratislava
- Dostál J, Červenka M (1992) Velký klíč na určování vyšších rostlin II, 1st edn. Slovenské pedagogické nakladatelstvo, Bratislava
- Dufraisse A (2008) Firewood management and woodland exploitation during the late Neolithic at Lac de Chalain (Jura, France). *Veget Hist Archaeobot* 17:199–210. <https://link.springer.com/article/10.1007/s00334-007-0098-6>

- Dunn RE (2015) What are phytoliths? <https://regan-dunn.org/phytoliths/>. Accessed 17 Feb 2022
- Ernst M, Jacomet S (2006) The value of the archaeobotanical analysis of desiccated plant remains from old buildings: methodological aspects and interpretation of crop weed assemblages. *Veget Hist Archaeobot* 15:45–56. <https://doi.org/10.1007/s00334-005-0077-8>
- Evans J (1897) The ancient stone implements, weapons, and ornaments of Great Britain. Longmans, London
- Ferrio JP, Alonso N, López JB, et al (2006) Carbon isotope composition of fossil charcoal reveals aridity changes in the NW Mediterranean Basin. *Glob Chang Biol* 12:1253–1266. <https://doi.org/10.1111/j.1365-2486.2006.01170.x>
- Firbas F (1949) Spät- und nacheiszeitliche Waldgeschichte Mitteleuropas nördlich der Alpen. Band 1: Allgemeine Waldgeschichte. Gustav Fischer Verlag, Jena
- Firbas F (1952) Spät- und nacheiszeitliche Waldgeschichte Mitteleuropas nördlich der Alpen. Band 2: Waldgeschichte der einzelnen Landschaften. Gustav Fischer Verlag, Jena
- Firbas F, Preuss H (1934) Über die Bestimmung der Walddichte und der Vegetation walddloser Gebiete mit Hilfe der Pollenanalyse. *Planta* 22:109–145
- Frangipane MA (1997) A 4th millennium temple/palace complex at Arslantepe-Malatya. North-South relations and the formation of early state societies in the Northern regions of Greater Mesopotamia. *Paléorient* 23:45–73. <https://doi.org/10.3406/paleo.1997.4644>
- French DH (1971) An Experiment in Water-Sieving. *Anatol Stud* 21:59–64. <https://doi.org/10.2307/3642629>
- Fritzsche CJ (1833) De plantarum polline. Dissertation inauguralis botanica. Typis Nietackianis, Berlin
- Fuller DQ (2002) Fifty years of archaeobotanical studies in India: Laying a solid foundation. In: Settar S, Korisettar R (eds) *Indian Archaeology in Retrospect, Volume III, Archaeology and Interactive Disciplines*. Manohar, New Delhi, pp 247–364
- Fuller DQ (2007) Contrasting Patterns in Crop Domestication and Domestication Rates: Recent Archaeobotanical Insights from the Old World. *Ann Bot* 100:903–924. <https://doi.org/10.1093/aob/mcm048>
- Fuller DQ, Stevens C (2009) Agriculture and the development of complex societies: An archaeobotanical agenda. In: Fairbairn AS, Weiss E (eds) *From Foragers to Farmers: Papers in Honour of Gordon C. Hillman*. Oxbow Books, Oxford, pp 37–57
- Gilbert SF (2000) Plant Life Cycles. In: Gilbert SF (eds) *Developmental Biology*, 6th edn. Sinauer Associates, Sunderland (MA). Available from <https://www.ncbi.nlm.nih.gov/books/NBK9980/>. Accessed 17 Feb 2022
- Green FJ (1979a) Phosphatic mineralization of seeds from archaeological sites. *J Arch Sci* 6:279–284
- Green FJ (1979b) Collection and interpretation of botanical information from Medieval urban excavations in southern England. In: Korber-Grohne U (ed) *Festschrift Maria Hopf: zum 65. Geburtstag am 14. September 1979*. Archaeo-Physika 8. Rheinland-Verl., Köln, pp 39–55
- Greguss P (1955) Xylotomische Bestimmung der heute lebenden Gymnospermen. Akadémiai Kiadó, Budapest
- Grew N (1682) The Anatomy of Plants. With an Idea of a Philosophical History of Plants and several other Lectures, Read before the Royal Society. W. Rawlins, London
- Griggs C, DeGaetano A, Kuniholm P, Newton M (2007) A regional high-frequency reconstruction of May–June precipitation in the north Aegean from oak tree rings, A.D. 1089–1989. *Int J Climatol* 27:1075–1089. <https://doi.org/10.1002/joc.1459>
- Gurova M (2014) Ethnographic and prehistoric threshing sledges: Evidence from Bulgaria. In: Van Gijn A, Whittaker JC, Anderson PC (eds) *Explaining and Exploring Diversity in Agricultural Technology*. Oxbow Books, Oxford, pp 145–160
- Hajnalová E (1993) Obilie v archeobotanických nálezoch na Slovensku. Archeologický ústav SAV, Nitra
- Hajnalová M (2008) Rozbor venčekov a stružlín z hrobky Henkelovcov na Oravskom hrade. *Zborník Oravského múzea* 25:61–66
- Hajnalová M (2011) Počiatky poľnohospodárstva na Slovensku: Pestovanie rastlín v mladšej a neskorej dobe kamennej. Habilitačná práca/Habilitation theses, Univerzita Konštantína Filozofa v Nitre
- Hajnalová M, Bielichová Z, Rajtár J, et al (2018) A Roman Structure from Hurbanovo, SW Slovakia: Multiproxy Investigation of Unique Waterlogged Deposit. *Interdiscip Archaeol* 9:43–69. <https://doi.org/10.24916/iansa.2018.1.4>
- Hajnalová M, Dreslerová D (2010) Ethnobotany of einkorn and emmer in Romania and Slovakia:

- Towards interpretation of archaeological evidence. *Památky archeologické* 101:169–202
- Hajnalová M, Kočárová R (2021) Analyses carpologiques et anthracologiques. In: Rapport annuel 2020 du program quadriennal de recherche 2017–2020 sur le Mont-Beuvray. Rapport de recherche. Bibracte EPCC, Glux-en-Glenne, pp 97–99
- Halbritter H, Ulrich S, Grímsson F, et al (2018) Pollen Morphology and Ultrastructure. In: Halbritter H, Ulrich S, Grímsson F, et al. (eds) *Illustrated Pollen Terminology*, 2nd edn. Springer Open, Cham, pp 37–65
- Hamdy R, Fahmy AG (2018) Study of Plant Remains from the Embalming Cache KV63 at Luxor, Egypt. In: Mercuri AM, D'Andrea AC, Fornaciari R, Höhn A (eds) *Plants and People in the African Past. Progress in African Archaeobotany*. Springer, Cham, pp 40–56
- Hardy K, Brand-Miller J, Brown KD, et al (2015) The Importance of Dietary Carbohydrate in Human Evolution. *Q Rev Biol* 90:251–268. <https://doi.org/10.1086/682587>
- Haslam M (2004) The decomposition of starch grains in soils: implications for archaeological residue analyses. *J Arch Sci* 31:1715–1734. <https://doi.org/10.1016/j.jas.2004.05.006>
- Hastorf C (1999) Recent Research in Paleoethnobotany. *J Archaeol Res* 7:55–103. <https://www.jstor.org/stable/41053165>. Accessed 17 Feb 2022
- Hather JG (1993) *An Archaeobotanical Guide to Root and Tuber Identification. Volume I: Europe and South West Asia*. Oxbow Books, Oxford
- Hather JG (2016) *Archaeological Parenchyma*. Routledge, New York (NY)
- Haugan E, Holst B (2014) Flax look-alikes: Pitfalls of ancient plant fibre identification. *Archaeometry* 56:951–960. <https://doi.org/10.1111/arc.12054>
- Heer O (1865) Die Pflanzen der Pfahlbauten. *Neujb Naturf Ges Zürich aus das Jahr 1866* 68:1–54
- Heer O (1878) Abstract of the treatise on Plants of the lake dwellings. In: Keller F (ed) *The lake dwellings of Switzerland and other parts of Europe*. Spotiswoode & Co., London, pp 336–354
- Heinz C, Figueiral I, Terral J-F, Claustre F (2016) Holocene vegetation changes in the northwestern Mediterranean: new palaeoecological data from charcoal analysis and quantitative eco-anatomy. *Holocene* 14:621–627. <https://doi.org/10.1191/0959683604hl739rr>
- Heiss AG (2009) Anatomy of European and North American woods – an interactive identification key. <http://www.erbsenzaehler.at/>. Accessed 1 Nov 2021
- Heiss AG, Oeggl K (2009) The plant macro-remains from the Iceman site (Tisenjoch, Italian–Austrian border, eastern Alps): new results on the glacier mummy's environment. *Veget Hist Archaeobot* 18:23–35. <https://link.springer.com/article/10.1007/s00334-007-0140-8>
- Helbæk H (1959) Die Paläoethnobotanik des Nahen Ostens und Europas. In: Bodrogi T, Boglár L (eds) *Opuscula ethnologica memoriae Ludovici Biró sacra*. Akadémiai Kiadó, Budapest, pp 265–289
- Helbæk H (1969) Plant Collecting, Dry-farming, and Irrigation Agriculture in Prehistoric Deh Luran. In: Hole F, Flannery KV, Neely JA (eds) *Prehistory and Human Ecology of the Deh Luran Plain: An Early Village Sequence from Khuzistan, Iran*. University of Michigan, Ann Arbor (MI), pp 383–426
- Henry AG (2015) Formation and Taphonomic Processes Affecting Starch Granules. In: Marston JM, d'Alpoim Guedes J, Warinner C (eds) *Method and Theory in Paleoethnobotany*. University Press of Colorado, Boulder (CO), pp 35–50
- Henry AG, Brooks AS, Piperno DR (2014) Plant foods and the dietary ecology of Neanderthals and early modern humans. *J Hum Evol* 69:44–54. <https://doi.org/10.1016/j.jhevol.2013.12.014>
- Herrera FL, Yacovleff E (1935) El mundo vegetal de los antiguos Peruanos (conclusión). *Revista del Museo Nacional* 4:31–102
- Hillman G (1981) Reconstructing crop husbandry practices from charred remains of crops. In: Mercer RJ (ed) *Farming practice in British prehistory*. University Press, Edinburgh, pp 123–161
- Hillman G (1984) Interpretation of archaeological plant remains: the application of ethnographic models from Turkey. In: Van Zeist W, Caspary WA (eds) *Plants and Ancient Man. Studies in Palaeoethnobotany. Proceedings of the Sixth Symposium of the International Work Group for Palaeoethnobotany, Groningen, Netherlands, 30 May–3 June 1983*. A. A. Balkema, Rotterdam, Boston (MA), pp 1–41
- Holden TG, Hather JG, Watson JPN (1995) Mesolithic plant exploitation at the Roc del Migdia, Catalonia. *J Arch Sci* 22:769–778. [https://doi.org/10.1016/0305-4403\(95\)90006-3](https://doi.org/10.1016/0305-4403(95)90006-3)
- Hooke R (1665) *Micrographia or Some Physiological Descriptions of Minute Bodies Made by Magnifying Glasses with Observations and Inquiries thereupon*, 1st edn. Jo. Martyn and Ja. Allestry, London

- Hubbard RNLB (1975) Assessing the botanical component of human palaeo-economies. *Bull Inst Archaeol Univ London* 12:197–205
- Hyde HA, Williams DA (1944) The right word. *Pollen analysis circular* 8:6
- Iversen J (1941) Land occupation in Denmark's stone age: a pollen-analytical study of the influence of farmer culture on the vegetational development. C. A. Reitzels Forlag, København
- Jacomet S (2012) Archaeobotany: Analyses of Plant Remains from Waterlogged Archaeological Sites. In: Menotti F, O'Sullivan A (eds) *The Oxford Handbook of Wetland Archaeology*. Oxford University Press, Oxford. <https://doi.org/10.1093/oxfordhb/9780199573493.013.0030>
- Jacomet S, Kreuz A (1999) *Archäobotanik. Aufgaben, Methoden und Ergebnisse vegetations- und agrargeschichtlicher Forschung*, 1st edn. Ulmer, Stuttgart
- Jakes KA (2000) Microanalytical methods for studying prehistoric textile fibres. In: Drooker PB, Webster LD (eds) *Beyond Cloth and Cordage. Archaeological Textile Research in the Americas*. University of Utah Press, Salt Lake City (UT), pp 51–68
- Jones G (1987) A statistical approach to the archaeological identification of crop processing. *J Arch Sci* 14:311–323. [https://doi.org/10.1016/0305-4403\(87\)90019-7](https://doi.org/10.1016/0305-4403(87)90019-7)
- Jones G (1991a) Numerical analysis in archaeobotany. In: Van Zeist W, Wasylikowa K, Behre KE (eds) *Progress in Old World Palaeoethnobotany. A retrospective view on the occasion of 20 years of the International Work Group of Palaeoethnobotany*. A. A. Balkema, Brookfield Publishing Co., Rotterdam, Philadelphia (PA), pp 63–80
- Jones G (1998) Wheat Grain Identification – Why Bother? *Environmental Archaeology* 2:29–34. <https://doi.org/10.1179/146141097790605640>
- Jones G (2009) Charred seeds: Introduction. In: Charles M, Crowther A, Ertug F, et al (eds) *Archaeobotanical Online Tutorial*. <https://sites.google.com/sheffield.ac.uk/archaeobotany/seeds>. Accessed 17 Feb 2022
- Jones MK (1991b) Sampling in palaeoethnobotany. In: Van Zeist W, Wasylikowa K, Behre KE (eds) *Progress in Old World Palaeoethnobotany. A retrospective view on the occasion of 20 years of the International Work Group of Palaeoethnobotany*. A. A. Balkema, Brookfield Publishing Co., Rotterdam, Philadelphia (PA), pp 53–62
- Jongman RHG, Ter Braak CJF, Van Tongeren OFR (1995) *Data Analysis in Community and Landscape Ecology*. Cambridge University Press, Cambridge. <https://doi.org/10.1017/CBO9780511525575>
- Kabukçu C (2018) Wood Charcoal Analysis in Archaeology. In: Pişkin E, Marciniak A, Bartkowiak M (eds) *Environmental Archaeology: Current Theoretical and Methodological Approaches*. Springer International Publishing AG, Basel, pp 133–154
- Kabukçu C, Chabal L (2021) Sampling and quantitative analysis methods in anthracology from archaeological contexts: Achievements and prospects. *Quat Int* 593–594:6–18. <https://doi.org/10.1016/j.quaint.2020.11.004>
- Katifori E, Alben S, Cerda E, et al (2010) Foldable structures and the natural design of pollen grains. *PNAS* 107:7635–7639. <https://doi.org/10.1073/pnas.0911223107>
- Katz NJ, Katz SV, Kipiani MG (1965) *Atlas i opredeliteľ plodov i semjan vstrečajúščichsia v červičnykh otnoženijach SSSR / Atlas and keys of fruits and seeds occurring in the Quaternary deposits of the USSR*. Nauka, Moskva
- Kidder TR (1997) Sugar Reflotation: An Alternative Method for Sorting Flotation-derived Heavy Fraction Samples. *J Field Archaeol* 24:39–45. <https://doi.org/10.2307/530559>
- Klečka A (1934) Rostlinná produkce v našem pravěkému zemědělství. *Věstník Československého zemědělského muzea* 3:98–102
- Klooss S, Fischer E, Out WA, Kirleis W (2016) Charred root tubers of lesser celandine (*Ficaria verna* HUDS.) in plant macro remain assemblages from Northern, Central and Western Europe. *Quat Int* 404:25–42. <https://doi.org/10.1016/j.quaint.2015.10.014>
- Kubiak-Martens L (2002) New evidence for the use of root foods in pre-agrarian subsistence recovered from the late Mesolithic site at Halsskov, Denmark. *Veget Hist Archaeobot* 11:23–32. <https://doi.org/10.1007/s003340200003>
- Kubiak-Martens L (2016) Scanning electron microscopy and starchy food in Mesolithic Europe: the importance of roots and tubers in Mesolithic diet. In: Hardy K, Kubiak-Martens L (eds) *Wild Harvest. Plants in the hominin and pre-agrarian human worlds*. Oxbow Books, Oxford, pp 113–134
- Kulpa W (1974) *Nasionoznawstwo chwastów. Państwowe Wydawnictwo Rolnicze i Leśne*, Warszawa
- Kuna M, Hajnalová M, Kovačiková L, et al (2013) Raně středověký areál v Roztokách z pohledu ekofaktů. *Památky archeologické* 104:59–147

- Lang G (1994) *Quartäre Vegetationsgeschichte Europas. Methoden und Ergebnisse*. Gustav Fischer Verlag, Jena, Stuttgart, New York (NY). <https://doi.org/10.1002/fedr.19951060117>
- Lange AG (1990) De Horden near Wijk bij Duurstede: Plant remains from a native settlement at the Roman frontier: a numerical approach (Nederlandse oudheden). ROB, Amersfoort
- Larbey C, Mentzer SM, Ligouis B, et al (2019) Cooked starchy food in hearths ca. 120 kya and 65 kya (MIS 5e and MIS 4) from Klasies River Cave, South Africa. *J Hum Evol* 131:210–227. <https://doi.org/10.1016/j.jhevol.2019.03.015>
- Lennstrom HA, Hastorf CA (1995) Interpretation in Context: Sampling and Analysis in Paleoethnobotany. *American Antiquity* 60:701–721. <https://doi.org/10.2307/282054>
- Lev E, Kislev ME, Bar-Yosef O (2005) Mousterian vegetal food in Kebara Cave, Mt. Carmel. *J Arch Sci* 32:475–484. <https://doi.org/10.1016/j.jas.2004.11.006>
- Limp WF (1974) Water Separation and Flotation Processes. *J Field Archaeol* 1:337–342. <https://doi.org/10.1179/009346974791491386>
- Lityńska-Zajac M, Wasylikowa K (eds) (2005) *Przewodnik do badań archeobotanicznych*, 1st edn. Sorus, Poznań
- Lodwick LA (2019) Agendas for Archaeobotany in the 21st Century: Data, dissemination and new directions. *Internet Archaeol* 53. <https://doi.org/10.11141/ia.53.7>
- Longford C (2009) Charred Tubers: Introduction. In: Charles M, Crowther A, Ertug F, et al (eds) *Archaeobotanical Online Tutorial*. <https://sites.google.com/sheffield.ac.uk/archaeobotany/tubers>. Accessed 17 Feb 2022
- Lubbock J (1865) *Pre-historic times. As illustrated by ancient remains, and the manners and customs of modern savages*, 1st edn. Williams & Norgate, London, Edinburgh
- Madella M (2008) The “stones from plants”: A review of phytolith studies and classification in Europe, Asia and North America. In: Zucol AF, Osterrieth ML, Brea M (eds) *Fitolitos: Estado actual de su conocimiento en América del Sur*. Universidad Nacional de Mar del Plata, Mar del Plata, pp 23–39
- Madella M, Alexandre A, Ball T, ICPN WORKING GROUP (2005) International Code for Phytolith Nomenclature 1.0. *Ann Bot* 96:253–260. <https://doi.org/10.1093/aob/mci172>
- Madella M, Jones MK, Goldberg P, et al (2002) *The Exploitation of Plant Resources by Neanderthals in Amud Cave (Israel): The Evidence from Phytolith Studies*. *J Arch Sci* 29:703–719. <https://doi.org/10.1006/jasc.2001.0743>
- Madella M, Lancelotti C, Savard M (eds) (2014) *Ancient Plants and People: Contemporary Trends in Archaeobotany*. The University of Arizona Press, Tucson (AZ)
- Madella M, Zurro D (2009) Phytoliths. In: Charles M, Crowther A, Ertug F, et al (eds) *Archaeobotanical Online Tutorial*. <https://sites.google.com/sheffield.ac.uk/archaeobotany/phytoliths>. Accessed 17 Feb 2022
- Malpighi M (1671) *Anatome Plantarum Idea*. Bologna
- Manten AA (1966) Half a century of modern palynology. *Earth Sci Rev* 2:277–316. [https://doi.org/10.1016/0012-8252\(66\)90032-8](https://doi.org/10.1016/0012-8252(66)90032-8)
- Manten AA (1969) On the earliest microscopical observations of pollen grains. *Rev Palaeobot Palynol* 9:5–16. [https://doi.org/10.1016/0034-6667\(69\)90010-4](https://doi.org/10.1016/0034-6667(69)90010-4)
- Marinova E, Thiébault S (2008) Anthracological analysis from Kovacevo, southwest Bulgaria: woodland vegetation and its use during the earliest stages of the European Neolithic. *Veget Hist Archaeobot* 17:223–231. <https://doi.org/10.1007/s00334-007-0103-0>
- Marston JM, D’Alpoim Guedes J, Warinner C (2014) *Method and Theory in Paleoethnobotany*. University Press of Colorado, Boulder (CO)
- Mascher M, Schuenemann VJ, Davidovich U, et al (2016) Genomic analysis of 6,000-year-old cultivated grain illuminates the domestication history of barley. *Nat Genet* 48:1089–1093. <https://doi.org/10.1038/ng.3611>
- Mason S, Hather J (2009) *Hunter-Gatherer Archaeobotany. Perspectives from the northern temperate zone*. Routledge, New York (NY)
- Miksicek CH (1987) Formation Processes of the Archaeobotanical Record. In: Schiffer MB (ed) *Advances in Archaeological Method and Theory*. Volume 10. Academic Press, Cambridge, pp 211–247. <https://www.jstor.org/stable/20210089>. Accessed 17 Feb 2022
- Molina RT, Rodríguez AM, Palaciso IS, López FG (1996) Pollen production in anemophilous trees. *Grana* 35:38–46. <https://doi.org/10.1080/00173139609430499>
- Moskal-del Hoyo M, Rauba-Bukowska A, Lityńska-Zajac M, et al (2017) Plant materials used as temper in the oldest Neolithic pottery from south-eastern Poland. *Veget Hist Archaeobot* 26:329–344. <https://doi.org/10.1007/s00334-016-0595-6>

- Mozdy M (2016) In the Tiny World of Starch Grains, Bigger is Better. <https://nhmu.utah.edu/blog/2016/08/08/tiny-world-starch-grains-bigger-better>. Accessed 17 Feb 2022
- Murphy C (2014) Mineralization of Macrobotanical Remains. In: Smith C (ed) Encyclopedia of Global Archaeology. Springer, New York (NY). https://doi.org/10.1007/978-1-4419-0465-2_2256
- Nesbitt M, Colledge S, Murray MA (2003) Organisation and Management of Seed Reference Collections. *Environ Archaeol* 8:77–84. <https://doi.org/10.1179/env.2003.8.1.77>
- Nesbitt M, Griegg J (1990) A bibliography for the archaeobotanical identification of seeds from Europe and the Near East. *Circaea* 7:11–30
- Netolitzky F (1914) Die Hirse aus antiken Funden. *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften, Mathematisch-naturwissenschaftliche Klasse, Abteilung I, Mineralogie, Botanik, Zoologie, Anatomie, Geologie, Paläontologie* 123:725–759
- Out WA, Madella M (2016) Morphometric distinction between bilobate phytoliths from *Panicum miliaceum* and *Setaria italica* leaves. *Archaeol Anthropol Sci* 8:505–521. <https://doi.org/10.1007/s12520-015-0235-6>
- Payne S (1972) Partial recovery and sample bias: The results of some sieving experiments. In: Higgs E S (ed) Papers in Economic Prehistory. Studies by members and associates of the British Academy Major Research Project in the early history of agriculture. Cambridge University Press, London, New York (NY), pp 49–64
- Pearsall DM (2000) Paleoethnobotany. A Handbook of Procedures, 2nd edn. Academic Press, San Diego (CA)
- Pearsall DM (2015) Formation Processes of Pollen and Phytoliths. In: Marston JM, D'Alpoim Guedes J, Warinner C (eds) Method and Theory in Paleoethnobotany. University Press of Colorado, Boulder (CO), pp 51–73
- Pessin H (2009) Wood charcoal. In: Charles M, Crowther A, Ertug F, et al (eds) Archaeobotanical Online Tutorial. <https://sites.google.com/sheffield.ac.uk/archaeobotany/charcoal>. Accessed 17 Feb 2022
- Piperno DR (2006) Phytoliths: A Comprehensive Guide for Archaeologists and Paleoecologists. AltaMira Press, Lanham (MD)
- Piqué R (1999) Quantification in Archaeobotany: Charcoal Analysis and Firewood Management. In: Barceló JA, Briz I, Vilá A (eds) New Techniques for Old Times – CAA 98. Computer Applications and Quantitative Methods in Archaeology. Proceedings of the 26th Conference, Barcelona, March 1998. BAR International Series 757. BAR Publishing, Oxford, pp 189–200. <https://doi.org/10.30861/9780860549611>
- Popper VS (1988) Selecting Quantitative Measurements in Paleoethnobotany. In: Hastorf CA, Popper VS (eds) Current Paleoethnobotany. Analytical Methods and Cultural Interpretations of Archaeological Plant Remains. The University of Chicago Press, Chicago (IL), pp 53–71
- Power RC, Salazar-García DC, Rubini M, et al (2018) Dental calculus indicates widespread plant use within the stable Neanderthal dietary niche. *J Hum Evol* 119:27–41. <https://doi.org/10.1016/j.jhevol.2018.02.009>
- Powers AH (1992) Great expectations: A short historical review of European Phytolith Systematics. In: Rapp G Jr, Mulholland SC (eds) Phytolith Systematics: Emerging issues. pp 15–35
- Ramenofsky AF, Standifer LC, Whitmer AM, Standifer MS (1986) A New Technique for Separating Flotation Samples. *Am Antiq* 51:66–72. <https://doi.org/10.2307/280394>
- Renfrew JM (1973) Palaeoethnobotany. The prehistoric food plants of the Near East and Europe. Methuen, London
- Richter C (2015) Wood Characteristics. Description, Causes, Prevention, Impact on Use and Technological Adaptation. Springer International Publishing, Cham, Heidelberg, New York (NY), Dordrecht, London
- Riding JB (2021) A guide to preparation protocols in palynology. *Palynology* 45, Suppl 1:1–110. <https://doi.org/10.1080/01916122.2021.1878305>
- Rybníček M, Kočár P, Muigg B, et al (2020) World's oldest dendrochronologically dated archaeological wood construction. *J Arch Sci* 115:art.no.105082. <https://doi.org/10.1016/j.jas.2020.105082>
- Sangster AG, Dale HM (1964) Pollen grain preservation of underrepresented species in fossil spectra. *Can J Bot* 42:437–449. <https://doi.org/10.1139/b64-044>
- Schermann S (1967) Magismeret I-II. Akadémiai Kiadó, Budapest
- Schoch W, Heller I, Schweingruber FH, Kienast F (2004) Wood anatomy of central European Species. Available from <http://www.woodanatomy.ch/>. Accessed 1 Nov 2021
- Schweingruber FH (1990) Microscopic wood anatomy. Structural variability of stems and twigs in recent and subfossil woods from Central Europe, 3rd edn. Eidgenössische Forschungsanstalt für Wald, Schnee und Landschaft WSL, Birmensdorf

- Shennan PS (1997) *Quantifying Archaeology*, 2nd edn. Edinburgh University Press, Edinburgh
- Stevens CJ, Nixon S, Murray MA, Fuller DQ (eds) (2013) *Archaeology of African Plant Use*, 1st edn. Left Coast Press, Walnut Creek (CA)
- Struever S (1968) Flotation Techniques for the Recovery of Small-Scale Archaeological Remains. *Am Antiq* 33:353–362. <https://doi.org/10.2307/278703>
- Szpak P, Chiou KL (2020) A comparison of nitrogen isotope compositions of charred and desiccated botanical remains from northern Peru. *Veget Hist Archaeobot* 29:527–538. <https://doi.org/10.1007/s00334-019-00761-2>
- Tempír Z (1966) Výsledky paleoetnobotanického studia pěstování zemědělských rostlin na území ČSSR. *Vědecké práce Československého zemědělského muzea* 6:27–144
- Terral J-F, Mengüal X (1999) Reconstruction of Holocene climate in southern France and eastern Spain using quantitative anatomy of olive wood and archaeological charcoal. *Palaeogeography, Palaeoclimatology, Palaeoecology* 153:71–92. [https://doi.org/10.1016/S0031-0182\(99\)00079-6](https://doi.org/10.1016/S0031-0182(99)00079-6)
- Torrence R, Barton H (eds) (2006) *Ancient Starch Research*. Left Coast Press, Walnut Creek (CA)
- Uebersax MA, Occeña LG (2003) LEGUMES. Legumes in the Diet. In: Caballero B (ed) *Encyclopedia of Food Sciences and Nutrition*, 2nd edn. Academic Press, Oxford, pp 3520–3528
- Urban MA, Romero IC, Sivaguru M, Punyasena SW (2018) Nested cell strainers: An alternative method of preparing palynomorphs and charcoal. *Rev Palaeobot Palynol* 253:101–109. <https://doi.org/10.1016/j.revpalbo.2018.04.002>
- Van der Veen M (1984) Sampling for seeds. In: Van Zeist W, Caspary WA (eds) *Plants and Ancient Man. Studies in Palaeoethnobotany. Proceedings of the Sixth Symposium of the International Work Group for Palaeoethnobotany, Groningen, Netherlands, 30 May–3 June 1983*. A. A. Balkema, Rotterdam, Boston (MA), pp 193–199
- Van der Veen M (1992) *Crop Husbandry Regimes. An Archaeobotanical Study of Farming in Northern England 1000 BC–AD 500*. J. R. Collis Publications, Sheffield
- Van der Veen M (2007) Formation processes of desiccated and carbonized plant remains – the identification of routine practice. *J Arch Sci* 34:968–990. <https://doi.org/10.1016/j.jas.2006.09.007>
- Van der Veen M, Fieller N (1982) Sampling seeds. *J Arch Sci* 9:287–298. [https://doi.org/10.1016/0305-4403\(82\)90024-3](https://doi.org/10.1016/0305-4403(82)90024-3)
- Van der Veen M, Jones G (2006) A re-analysis of agricultural production and consumption: implications for understanding the British Iron Age. *Veget Hist Archaeobot* 15:217–228. <https://doi.org/10.1007/s00334-006-0040-3>
- VanDerwarker AM, Bardolph DN, Hoppa KM, et al (2016) New World Paleoethnobotany in the New Millennium (2000–2013). *J Archaeol Res* 24:125–177. <https://doi.org/10.1007/s10814-015-9089-9>
- Van Geel B (2004) Plant remains in the Yukagir Mammoth dung and an environmental reconstruction. In: *The Yukagir Mammoth. Outcome of the first stage of work. Proceedings of International Scientific Practical Conference, Yakutsk, 2004*. Yakutsk Division of SB RAS Publishing House, Yakutsk, pp 58–59
- Van Geel B, Aptroot A, Baittinger C, et al (2008) The Ecological implications of a Yakutian mammoth's last meal. *Quat Res* 69:361–376. <https://doi.org/10.1016/j.yqres.2008.02.004>
- Van Geel B, Birks H, Aptroot A, et al (2005) Environmental reconstruction based on the Yukagir Mammoth's last meal. In: *Proceedings of the International Symposium on Yukagir Mammoth. Recent advance in Yukagir Mammoth researches. Japan Association for the 2005 World Exposition, Aichi*, pp 13–14
- Van Zeist W, Caspary WA (eds) (1984) *Plants and Ancient Man. Studies in Palaeoethnobotany. Proceedings of the Sixth Symposium of the International Work Group for Palaeoethnobotany, Groningen, Netherlands, 30 May–3 June 1983*. A. A. Balkema, Rotterdam, Boston (MA)
- Van Zeist W, Wasylikowa K, Behre KE (eds) (1991) *Progress in Old World Palaeoethnobotany. A retrospective view on the occasion of 20 years of the International Work Group of Palaeoethnobotany*. A. A. Balkema, Brookfield Publishing Co., Rotterdam, Philadelphia (PA)
- Vavilov NI (1992) *Origin and Geography of Cultivated Plants*. Cambridge University Press, Cambridge
- Wagenführ R (1966) *Anatomie des Holzes*. Fachbuchverlag Leipzig, Leipzig
- Walker JW (1974) Evolution of Exine Structure in the Pollen of Primitive Angiosperms. *Am J Bot* 61:891–902. <https://doi.org/10.1002/j.1537-2197.1974.tb12315.x>
- Wallace M, Jones G, Charles M, et al (2019) Re-analysis of archaeobotanical remains from pre- and early agricultural sites provides no evidence for a narrowing of the wild plant food spectrum during the origins of agriculture in southwest Asia.

- Veget Hist Archaeobot 28:449–463. <https://doi.org/10.1007/s00334-018-0702-y>
- Wasylikowa K, Mączyńska M, Ralska-Jasiewiczowa M, et al (2012) The impact of the Przeworsk culture settlement (200–500 AD) on the vegetation in the Liswarta River basin, south-central Poland: combined pollen and plant macrofossil evidence. *Acta Palaeobot* 52:33–58
- Watson JPN (1979) The estimation of the relative frequencies of mammalian species: Khirokitia 1972. *J Arch Sci* 6:127–137
- Webster EA, Tilston EL, Chudek JA, Hopkins DW (2008) Decomposition in soil and chemical characteristics of pollen. *Eur J Soil Sci* 59:551–558. <https://doi.org/10.1111/j.1365-2389.2008.01022.x>
- Weyrich LS, Duchene S, Soubrier J, et al (2017) Neanderthal behaviour, diet, and disease inferred from ancient DNA in dental calculus. *Nature* 544:357–361. <https://doi.org/10.1038/nature21674>
- Wilkinson K, Stevens C (2003) *Environmental Archaeology. Approaches, Techniques & Applications*, 1st edn. Tempus Publishing Group Ltd., Stroud
- Willcox G (2002) Evidence for ancient forest cover and deforestation from charcoal analysis of ten archaeological sites on the Euphrates. In: Thiebault S (ed) *Charcoal Analysis. Methodological Approaches, Palaeoecological Results and Wood Uses*. Proceedings of the Second International Meeting of Anthracology, Paris, September 2000. Bar Publishing, Oxford, pp 141–145
- Willcox G, Fornite S, Herveux L (2008) Early Holocene cultivation before domestication in northern Syria. *Veget Hist Archaeobot* 17:313–325. <https://doi.org/10.1007/s00334-007-0121-y>
- Willerding U (1971) Methodische Probleme bei der Untersuchung und Auswertung von Pflanzenfunden in vor- und frühgeschichtlichen Siedlungen. *Nachrichten Niedersachsens Urgesch* 40:180–198
- Willerding U (1991) Präsenz, Erhaltung und Repräsentanz von Pflanzenresten in archäologischem Fundgut. In: Van Zeist W, Wasylikowa K, Behre KE (eds) *Progress in Old World Palaeoethnobotany. A retrospective view on the occasion of 20 years of the International Work Group of Palaeoethnobotany*. A. A. Balkema, Brookfield Publishing Co., Rotterdam, Philadelphia (PA), pp 25–52
- Willerslev E, Davison J, Moora M, et al (2014) Fifty thousand years of Arctic vegetation and megafaunal diet. *Nature* 506:47–51. <https://doi.org/10.1038/nature12921>
- Williams DA (1973) Flotation at Sirāf. *Antiquity* 47:288–292. <https://doi.org/10.1017/S0003598X00039132>
- Wittmack L (1880) Antike Samen aus Troja und Peru. *Monatsschrift des Vereines zur Beförderung des Gartenbaues in den Königlich Preussischen Staaten und der Gesellschaft der Gartenfreunde Berlins* 23:120–121
- Wollstonecroft MM (2011) Investigating the role of food processing in human evolution: a niche construction approach. *Archaeol Anthropol Sci* 3:141–150. <https://doi.org/10.1007/s12520-011-0062-3>
- Wrangham R (2009) *Catching fire: How cooking made us humans*, 1st edn. Basic Books, New York (NY)
- Wülfert S (1999) *Der Blick ins Bild. Lichtmikroskopische Methoden zur Untersuchung von Bildaufbau, Fasern und Pigmenten*. Seemann, Ravensburg
- Yacovleff E, Herrera FL (1934) El mundo vegetal de los antiguos Peruanos. *Revista del Museo Nacional* 3:241–322.