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The Bom Santo Cave (Lisbon, Portugal): Catchment, Diet, and Patterns of Mobility of a Middle Neolithic Population

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Abstract

The study of the Bom Santo Cave (central Portugal), a Neolithic cemetery, indicates a complex social, palaeoeconomic, and population scenario. With isotope, aDNA, and provenance analyses of raw materials coupled with stylistic variability of material culture items and palaeogeographical data, light is shed on the territory and social organization of a population dated to 3800–3400 cal BC, i.e. the Middle Neolithic. Results indicate an itinerant farming, segmentary society, where exogamic practices were the norm. Its lifeway may be that of the earliest megalithic builders of the region, but further research is needed to correctly evaluate the degree of this community's participation in such a phenomenon.

L'étude de la nécropole néolithique découverte dans la grotte de Bom Santo (Portugal central) révèle un scénario social, économique et démographique complexe. Les analyses des isotopes, de l'ADN ancien et de la provenance des matières premières ainsi que l'examen des variations stylistiques du mobilier et des données de la paléogéographie donnent un aperçu du territoire et de l'organisation sociale d'une population datant du Néolithique moyen, soit entre 3800 et 3400 cal BC. Nos résultats indiquent la présence d'une communauté agricole itinérante et segmentée où les pratiques de l'exogamie étaient en vigueur. Ce mode de vie était peut-être aussi celui des premiers constructeurs de mégalithes de la région mais cette hypothèse devra être testée par des études ultérieures ayant pour but d'évaluer le degré de participation de notre communauté au phénomène mégalithique. *Translation by Madeleine Hummler.*

Die Untersuchung der Betsattungsstätte in der Höhle von Bom Santo (Zentralportugal) ergibt ein komplexes soziales, wirtschaftliches und demografisches Bild. Die Auswertung der Isotopen, der alten DNA (aDNA), der Herkunft der Rohstoffe, sowie auch der stilistischen Variationen in der materiellen Kultur und der paläogeografischen Angaben verdeutlicht wie eine mittelneolithische Gemeinschaft zwischen 3800 und 3400 cal BC räumlich und sozial organisiert war. Die Ergebnisse zeigen, dass es sich um eine wandernde, segmentierte Bauerngesellschaft handelte, die wahrscheinlich Exogamie ausübte. Die ersten Megalithbauer der Gegend haben vielleicht auch solch eine Lebensweise gefolgt, aber weitere Untersuchungen müssen noch unternommen werden, um das Ausmaß der Beteiligung der Bom Santo Bevölkerung am megalithischen Phänomen richtig zu bewerten. *Translation by Madeleine Hummler.*

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References

Hide All

Araújo, A.C. & Lejeune, M. 1995. *Gruta do Escoural: necrópole neolítica e arte rupestre paleolítica*. Lisboa: IPPAR.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Gruta+do+Escoural:+necr%C3%B3pole+neol%C3%ADtica+e+arte+rupestre+paleol%C3%ADtica&public)

Bentley, R.A. 2006. Strontium Isotopes from the Earth to the Archaeological Skeleton: A Review. *Journal of Archaeological Method and Theory*, **13** (3): 135–87.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Strontium+Isotopes+from+the+Earth+to+the+Archaeological+Skeleton:+A+Review&publication+year=

Bentley, R.A., Bickle, P., Fibiger, L., Nowell, G.M., Dale, C.W., Hedges, R.E.M., Hamilton, J., Wahl, J., Francken, M., Grupe, G., Lenneis, E., Tescher-Nicola, M., Arbogast, R.-M., Hofmann, D. & Whittle, A. 2012. Community Differentiation and Kinship Among Europe's First Farmers. *Proceedings of the National Academy of Sciences*, **109** (24): 9326–30. CrossRef (<http://dx.doi.org/10.1073/pnas.1113710109>) |

Google Scholar (https://scholar.google.com/scholar_lookup?title=Community+Differentiation+and+Kinship+Among+Europe's+First+Farmers&publication+year=2012&a+Nicola+M.&author=Arbogast+R.-M.&author=Hofmann+D.&author=Whittle+A.&journal=Proceedings+of+the
| PubMed (<https://www.ncbi.nlm.nih.gov/pubmed/22645332>)

Boaventura, R. 2011. Chronology of Megalithism in South-Central Portugal. *Menga*, **1**: 159–90.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Chronology+of+Megalithism+in+South-Central+Portugal&publication+year=2011&author=Boaventura+R.&journal=Menga&volume=1)

Bronk-Ramsey, C. 2012. *OxCal Program V4.1.5*. Oxford: University of Oxford.

Google Scholar (https://scholar.google.com/scholar_lookup?title=OxCal+Program+V4.1.5&publication+year=2012&author=Bronk-Ramsey+C.)

Callapez, P.M. 2014. Terrestrial gastropods. In: Carvalho, A.F., ed. *Bom Santo Cave (Lisbon) and the Middle Neolithic Societies of Southern Portugal*. Faro: Universidade do Algarve, pp. 45–60.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Terrestrial+gastropods&publication+year=2014&author=Callapez+P.M.&author=Carvalho+A.F.&pages+60)

Cardoso, J.L. 2002. *Pré-História de Portugal*. Lisboa: Universidade Aberta.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Pr%C3%A9-Hist%C3%B3ria+de+Portugal&publication+year=2002&author=Cardoso+J.L.)

Cardoso, J.L. 2003. A utensilagem óssea de uso comum do povoado pré-histórico de Leceia (Oeiras). *Estudos Arqueológicos de Oeiras*, **11**: 25–84.

Google Scholar ([https://scholar.google.com/scholar_lookup?title=A+utensilagem+%C3%B3ssea+de+uso+comum+do+povoado+pr%C3%A9-hist%C3%B3rico+de+Leceia+\(Oeiras&publication+year=2003&author=Cardoso+J.L.&journal=Estudos+Arqueol%C3%B3gicos+de+Oeiras&+84](https://scholar.google.com/scholar_lookup?title=A+utensilagem+%C3%B3ssea+de+uso+comum+do+povoado+pr%C3%A9-hist%C3%B3rico+de+Leceia+(Oeiras&publication+year=2003&author=Cardoso+J.L.&journal=Estudos+Arqueol%C3%B3gicos+de+Oeiras&+84))

Cardoso, J.L. 2014. Polished Stone Tools. In: Carvalho, A.F., ed. *Bom Santo Cave (Lisbon) and the Middle Neolithic Societies of Southern Portugal*. Faro: Universidade do Algarve, pp. 185–94.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Polished+Stone+Tools&publication+year=2014&author=Cardoso+J.L.&author=Carvalho+A.F.)

Carvalho, A.F. 2014. Bom Santo Cave in context. A Preliminary Contribution to the Study of the First Megalith Builders of Southern Portugal. In: Carvalho, A.F., ed. *Bom Santo Cave (Lisbon) and the Middle Neolithic Societies of Southern Portugal*. Faro: Universidade do Algarve, pp. 209–30.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Bom+Santo+Cave+in+context.+A+Preliminary+Contribution+to+the+Study+of+the+First+Megalith+Bui

Carvalho, A.F. & Cardoso, J.L. 2015. Insights on the Changing Dynamics of Cemetery Use in the Neolithic and Chalcolithic of Southern Portugal. Radiocarbon Dating of Lugar do Canto Cave (Santarém). *Spal*, **24**: 35–53.

Google Scholar ([https://scholar.google.com/scholar_lookup?title=Insights+on+the+Changing+Dynamics+of+Cemetery+Use+in+the+Neolithic+and+Chalcolithic+of+Sout+\(Santar%C3%A9m\)&publication+year=2015&author=Carvalho+A.F.&author=Cardoso+J.L.&journal=Spal&vol](https://scholar.google.com/scholar_lookup?title=Insights+on+the+Changing+Dynamics+of+Cemetery+Use+in+the+Neolithic+and+Chalcolithic+of+Sout+(Santar%C3%A9m)&publication+year=2015&author=Carvalho+A.F.&author=Cardoso+J.L.&journal=Spal&vol))

Carvalho, A.F. & Gibaja, J.F. 2014. Knapped Stone Tools. In: Carvalho, A.F., ed. *Bom Santo Cave (Lisbon) and the Middle Neolithic Societies of Southern Portugal*. Faro: Universidade do Algarve, pp. 173–84.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Knapped+Stone+Tools&publication+year=2014&author=Carvalho+A.F.&author=Gibaja+J.F.&author=Ca)

Carvalho, A.F. & Masucci, M.A. 2014. Pottery. In: Carvalho, A.F., ed. *Bom Santo Cave (Lisbon) and the Middle Neolithic Societies of Southern Portugal*. Faro: Universidade do Algarve, pp. 161–72.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Pottery&publication+year=2014&author=Carvalho+A.F.&author=Masucci+M.A.&author=Carvalho+A.F.)

Carvalho, A.F. & Petchey, F. 2013. Stable Isotope Evidence of Neolithic Palaeodiets in the Coastal Regions of Southern Portugal. *Journal of Island & Coastal Archaeology*, **8** (3): 361–83.

CrossRef (<http://dx.doi.org/10.1080/15564894.2013.811447>) |

Google Scholar (https://scholar.google.com/scholar_lookup?title=Stable+Isotope+Evidence+of+Neolithic+Palaeodiets+in+the+Coastal+Regions+of+Southern+Portugal&)

Carvalho, A.F., Gonçalves, D., Granja, R. & Petchey, F. 2012. Algar do Bom Santo: a Middle Neolithic Necropolis in Portuguese Estremadura. In: Gibaja, J.F., Carvalho, A.F. and Chambon, P., eds. *Funerary Practices in the Iberian Peninsula from the Mesolithic to the Chalcolithic (British Archaeological Reports International Series 2417)*. Oxford: Archaeopress, pp. 77–90.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Algar+do+Bom+Santo:+a+Middle+Neolithic+Necropolis+in+Portuguese+Estremadura&publication+ye.90)

Carvalho, A.F., Gibaja, J.F. & Cardoso, J.L. 2013. Insights Into the Earliest Agriculture of Central Portugal: Sickle Implements from the Early Neolithic Site of Cortiçóis (Santarém). *Comptes Rendus Palevol*, **12**: 31–43.

CrossRef (<http://dx.doi.org/10.1016/j.crpv.2012.09.004>) |

Google Scholar ([https://scholar.google.com/scholar_lookup?title=Insights+Into+the+Earliest+Agriculture+of+Central+Portugal:+Sickle+Implements+from+the+Early+Ne\(Santar%C3%A9m\)&publication+year=2013&author=Carvalho+A.F.&author=Gibaja+J.F.&author=Cardoso+J.43](https://scholar.google.com/scholar_lookup?title=Insights+Into+the+Earliest+Agriculture+of+Central+Portugal:+Sickle+Implements+from+the+Early+Ne(Santar%C3%A9m)&publication+year=2013&author=Carvalho+A.F.&author=Gibaja+J.F.&author=Cardoso+J.43))

Correia, A.M. & Teixeira, C. 1949. *A jazida pré-histórica de Eira Pedrinha (Condeixa)*. Lisbon: Serviços Geológicos de Portugal.

Google Scholar ([https://scholar.google.com/scholar_lookup?title=A+jazida+pr%C3%A9-hist%C3%B3rica+de+Eira+Pedrinha+\(Condeixa\)&publication+year=1949&author=Correia+A.M.&author=Teixeira+C.](https://scholar.google.com/scholar_lookup?title=A+jazida+pr%C3%A9-hist%C3%B3rica+de+Eira+Pedrinha+(Condeixa)&publication+year=1949&author=Correia+A.M.&author=Teixeira+C.))

Costa, F.A.P. 1868. *Noções sobre o estado pré-histórico da Terra e do Homem seguidas da descrição de alguns dolmens ou antas de Portugal*. Lisbon: Academia Real das Sciencias.

Google Scholar (https://scholar.google.com/scholar_lookup?title=No%C3%A7%C3%B5es+sobre+o+estado+prehist%C3%B3rico+da+Terra+e+do+Homem+seguidas+da+

Dean, R.M. & Carvalho, A.F. 2014. Faunal Remains, Adornments and Bone Tools. In: Carvalho, A.F., ed. *Bom Santo Cave (Lisbon) and the Middle Neolithic Societies of Southern Portugal*. Faro: Universidade do Algarve, pp. 195–205.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Faunal+Remains+Adornments+and+Bone+Tools&publication+year=2014&author=Dean+R.M.&author=205)

Deguilloux, M.-F., Soler, L., Pemonge, M.-H., Scarre, C., Jousaume, R. & Laporte, L. 2011. News from the West: Ancient DNA from a French Megalithic Burial Chamber. *American Journal of Physical Anthropology*, **144** (1): 108–18. CrossRef (<http://dx.doi.org/10.1002/ajpa.21376>) |

Google Scholar (https://scholar.google.com/scholar_lookup?title=News+from+the+West:+Ancient+DNA+from+a+French+Megalithic+Burial+Chamber&publication+year:F.&author=Soler+L.&author=Pemonge+M.-H.&author=Scarre+C.&author=Jousaume+R.&author=Laporte+L.&journal=American+Journal+of+Physical+
| PubMed (<https://www.ncbi.nlm.nih.gov/pubmed/20717990>)

Delgado, J.F.N. 1884. La Grotte de Furninha a Peniche. *Congrès International d'Anthropologie et d'Archéologie Préhistoriques*. Lisbonne: Académie Royale des Sciences, pp. 17–278.

Google Scholar (https://scholar.google.com/scholar_lookup?title=La+Grotte+de+Furninha+a+Peniche&publication+year=1884&author=Delgado+J.F.N.&pages=17-278)

Duarte, C. 1998. Necrópole neolítica do Algar do Bom Santo: contexto cronológico e espaço funerário. *Revista Portuguesa de Arqueologia*, **1** (2): 107–18.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Necr%C3%B3pole+neol%C3%ADtica+do+Algar+do+Bom+Santo:+contexto+cronol%C3%B3gico+e+esp

Duarte, C. & Arnaud, J.M. 1996. Algar do Bom Santo: une nécropole néolithique dans l'Estremadura portugaise. *I Congrès del Neolític a la Península Ibèrica*, **2**. Gavà: Museo de Gavà, pp. 505–08.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Algar+do+Bom+Santo:+une+n%C3%A9cropole+n%C3%A9olithique+dans+l'Estremadura+portugaise&

Duday, H. & Guillon, M. 2006. Understanding the Circumstances of Decomposition when the Body is Skeletonized. In: Schmitt, A., Cunha, E. and Pinheiro, J., eds. *Forensic Anthropology and Medicine*. New Jersey: Humana Press, pp. 117–58.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Understanding+the+Circumstances+of+Decomposition+when+the+Body+is+Skeletonized&publicatio

Fernández, E. & Arroyo-Pardo, E. 2014. Palaeogenetic Study of the Human Remains. In: Carvalho, A.F., ed. *Bom Santo Cave (Lisbon) and the Middle Neolithic Societies of Southern Portugal*. Faro: Universidade do Algarve, pp. 133–42.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Palaeogenetic+Study+of+the+Human+Remains&publication+year=2014&author=Fern%C3%A1ndez+E.Pardo+E.&author=Carvalho+A.F.)

Fischer, A., Olsen, J., Richards, M., Heinemeier, J., Sveinbjörnsdóttir, Á.E. & Bennike, P. 2007. Coast-Inland Mobility and Diet in the Danish Mesolithic and Neolithic: Evidence from Stable Isotope Values of Humans

and Dogs. *Journal of Archaeological Science*, **34**: 2125–50.

CrossRef (<http://dx.doi.org/10.1016/j.jas.2007.02.028>) |

Google Scholar ([https://scholar.google.com/scholar_lookup?title=Coast-](https://scholar.google.com/scholar_lookup?title=Coast-Inland+Mobility+and+Diet+in+the+Danish+Mesolithic+and+Neolithic:+Evidence+from+Stable+Isotope+Valu)

[Inland+Mobility+and+Diet+in+the+Danish+Mesolithic+and+Neolithic:+Evidence+from+Stable+Isotope+Valu](https://scholar.google.com/scholar_lookup?title=Coast-Inland+Mobility+and+Diet+in+the+Danish+Mesolithic+and+Neolithic:+Evidence+from+Stable+Isotope+Valu)

Frei, K.M. & Price, T.D. 2012. Strontium Isotopes and Human Mobility in Prehistoric Denmark. *Journal of Anthropological and Archaeological Sciences*, **4**: 103–14.

Google Scholar ([https://scholar.google.com/scholar_lookup?](https://scholar.google.com/scholar_lookup?title=Strontium+Isotopes+and+Human+Mobility+in+Prehistoric+Denmark&publication+year=2012&author=)

[title=Strontium+Isotopes+and+Human+Mobility+in+Prehistoric+Denmark&publication+year=2012&author=](https://scholar.google.com/scholar_lookup?title=Strontium+Isotopes+and+Human+Mobility+in+Prehistoric+Denmark&publication+year=2012&author=)

Gamba, C., Fernández, E., Tirado, M., Deguilloux, M.F., Pemonge, M.H., Utrilla, P., Edo, M., Molist, M., Rasteiro, R., Chikhi, L. & Arroyo-Pardo, E. 2012. Ancient DNA from an Early Neolithic Iberian Population Supports a Pioneer Colonization by First Farmers. *Molecular Ecology*, **21**: 45–56.

CrossRef (<http://dx.doi.org/10.1111/j.1365-294X.2011.05361.x>) |

Google Scholar ([https://scholar.google.com/scholar_lookup?](https://scholar.google.com/scholar_lookup?title=Ancient+DNA+from+an+Early+Neolithic+Iberian+Population+Supports+a+Pioneer+Colonization+by+Fi)

[title=Ancient+DNA+from+an+Early+Neolithic+Iberian+Population+Supports+a+Pioneer+Colonization+by+Fi](https://scholar.google.com/scholar_lookup?title=Ancient+DNA+from+an+Early+Neolithic+Iberian+Population+Supports+a+Pioneer+Colonization+by+Fi)
[Pardo+E.&journal=Molecular+Ecology&volume=21&doi=10.1111/j.1365-294X.2011.05361.x&pages=45-56](https://scholar.google.com/scholar_lookup?title=Ancient+DNA+from+an+Early+Neolithic+Iberian+Population+Supports+a+Pioneer+Colonization+by+Fi))

| PubMed (<https://www.ncbi.nlm.nih.gov/pubmed/22117930>)

Gibaja, J.F. & Carvalho, A.F. 2014. Use-Wear Analysis of Chipped Stone Assemblages from Neolithic Burial Caves in Portuguese Estremadura: The Case of Bom Santo (Lisbon). In: Marreiros, J., Bicho, N.F. and Gibaja, J.F., eds. *Use-Wear 2012. International Conference on Use-Wear Analysis*. Newcastle upon Tyne: Cambridge Scholars Publishing, pp. 597–606.

Google Scholar ([https://scholar.google.com/scholar_lookup?title=Use-](https://scholar.google.com/scholar_lookup?title=Use-Wear+Analysis+of+Chipped+Stone+Assemblages+from+Neolithic+Burial+Caves+in+Portuguese+Estremadu)

[Wear+Analysis+of+Chipped+Stone+Assemblages+from+Neolithic+Burial+Caves+in+Portuguese+Estremadu](https://scholar.google.com/scholar_lookup?title=Use-Wear+Analysis+of+Chipped+Stone+Assemblages+from+Neolithic+Burial+Caves+in+Portuguese+Estremadu)
 [\(Lisbon\)&publication+year=2014&author=Gibaja+J.F.&author=Carvalho+A.F.&author=Marreiros+J.&author=606](https://scholar.google.com/scholar_lookup?title=Use-Wear+Analysis+of+Chipped+Stone+Assemblages+from+Neolithic+Burial+Caves+in+Portuguese+Estremadu))

Gómez-Sánchez, D., Olalde, I., Pierini, F., Matas-Lalueza, L., Gigli, E., Lari, M., Civit, S., Lozano, M., Vergès, J.M., Caramelli, D., Ramírez, O. & Lalueza-Fox, C. 2014. Mitochondrial DNA from El Mirador Cave (Atapuerca, Spain) Reveals the Heterogeneity of Chalcolithic Populations. *PLoS ONE*, **9**: e105105. Available at: <<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0105105>

(<http://www.journals.plos.org/plosone/article?id=10.1371/journal.pone.0105105>)> [accessed 3 June 2015].

CrossRef (<http://dx.doi.org/10.1371/journal.pone.0105105>) |

Google Scholar (https://scholar.google.com/scholar_lookup?title=Mitochondrial+DNA+from+El+Mirador+C
 [\(Atapuerca+Spain\)+Reveals+the+Heterogeneity+of+Chalcolithic+Populations&publication+year=2014&auth](https://scholar.google.com/scholar_lookup?title=Mitochondrial+DNA+from+El+Mirador+C)

[S%C3%A1nchez+D.&author=Olalde+I.&author=Pierini+F.&author=Matas-](https://scholar.google.com/scholar_lookup?title=Mitochondrial+DNA+from+El+Mirador+C)
[Lalueza+L.&author=Gigli+E.&author=Lari+M.&author=Civit+S.&author=Lozano+M.&author=Verg%C3%A8s+](https://scholar.google.com/scholar_lookup?title=Mitochondrial+DNA+from+El+Mirador+C)
[Fox+C.&journal=PLoS+ONE&volume=9&doi=10.1371/journal.pone.0105105](https://scholar.google.com/scholar_lookup?title=Mitochondrial+DNA+from+El+Mirador+C))

| PubMed (<https://www.ncbi.nlm.nih.gov/pubmed/25116044>)

Gonçalves, D., Granja, R., Alves-Cardoso, F. & Carvalho, A.F. 2014. Sample-Specific Sex Estimation in Archaeological Contexts with Commingled Human Remains: A Case Study from the Middle Neolithic Cave of Bom Santo in Portugal. *Journal of Archaeological Science*, **49**: 185–91.

CrossRef (<http://dx.doi.org/10.1016/j.jas.2014.05.011>) |

Google Scholar ([https://scholar.google.com/scholar_lookup?title=Sample-](https://scholar.google.com/scholar_lookup?title=Sample-Specific+Sex+Estimation+in+Archaeological+Contexts+with+Commingled+Human+Remains:+A+Case+Study)

[Specific+Sex+Estimation+in+Archaeological+Contexts+with+Commingled+Human+Remains:+A+Case+Study](https://scholar.google.com/scholar_lookup?title=Sample-Specific+Sex+Estimation+in+Archaeological+Contexts+with+Commingled+Human+Remains:+A+Case+Study)
 [Cardoso+F.&author=Carvalho+A.F.&journal=Journal+of+Archaeological+Science&volume=49&doi=10.1016/j](https://scholar.google.com/scholar_lookup?title=Sample-Specific+Sex+Estimation+in+Archaeological+Contexts+with+Commingled+Human+Remains:+A+Case+Study)

Granja, R., Alves-Cardoso, F. & Gonçalves, D. 2014a. Taphonomy and Funerary Practices. In: Carvalho, A.F., ed. *Bom Santo Cave (Lisbon) and the Middle Neolithic Societies of Southern Portugal*. Faro: Universidade do Algarve, pp. 79–100.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Taphonomy+and+Funerary+Practices&publication+year=2014a&author=Granja+R.&author=Alves-Cardoso+F.&author=Gon%C3%A7alves+D.&author=Carvalho+A.F.&pages=79-100)

Granja, R., Gonçalves, D. & Alves-Cardoso, F. 2014b. Osteological Sample Profile. In: Carvalho, A.F., ed. *Bom Santo Cave (Lisbon) and the Middle Neolithic Societies of Southern Portugal*. Faro: Universidade do Algarve, pp. 101–20.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Osteological+Sample+Profile&publication+year=2014b&author=Granja+R.&author=Gon%C3%A7alves-Cardoso+F.&author=Carvalho+A.F.)

Haak, W., Brandt, G., De Jong, H.N., Meyer, C., Ganslmeier, R., Heyd, V., Hawkesworth, C., Pike, A.W.G., Meller, H. & Alt, K.W. 2008. Ancient DNA, Strontium Isotopes, and Osteological Analyses Shed Light on Social and Kinship Organization of the Later Stone Age. *Proceedings of the National Academy of Sciences*, **105** (47): 18226–31. CrossRef (<http://dx.doi.org/10.1073/pnas.0807592105>) |

Google Scholar (https://scholar.google.com/scholar_lookup?title=Ancient+DNA+Strontium+Isotopes+and+Osteological+Analyses+Shed+Light+on+Social+and+Kinship+) | PubMed (<https://www.ncbi.nlm.nih.gov/pubmed/19015520>)

Hedges, R.E.M. & Reynard, L.M. 2007. Nitrogen Isotopes and the Trophic Level of Humans in Archaeology. *Journal of Archaeological Science*, **34**: 1240–1251. CrossRef (<http://dx.doi.org/10.1016/j.jas.2006.10.015>) |

Google Scholar (https://scholar.google.com/scholar_lookup?title=Nitrogen+Isotopes+and+the+Trophic+Level+of+Humans+in+Archaeology&publication+year=2007&au 1251)

Hervella, M., Izagirre, N., Alonso, S., Fregel, R., Alonso, A., Cabrera, V.M. & de la Rúa, C. 2012. Ancient DNA from Hunter-Gatherer and Farmer Groups from Northern Spain Supports a Random Dispersion Model for the Neolithic Expansion into Europe. *PLoS ONE*, **7**: e34417. Available at:

<<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0034417>

(<http://www.journals.plos.org/plosone/article?id=10.1371/journal.pone.0034417>)> [accessed 3 June 2015].

CrossRef (<http://dx.doi.org/10.1371/journal.pone.0034417>) |

Google Scholar (https://scholar.google.com/scholar_lookup?title=Ancient+DNA+from+Hunter-Gatherer+and+Farmer+Groups+from+Northern+Spain+Supports+a+Random+Dispersion+Model+for+the+) | PubMed (<https://www.ncbi.nlm.nih.gov/pubmed/22563371>)

Lacan, M., Keyser, C., Ricaut, F.-X., Brucato, N., Tarrús, J., Bosch, A., Guilaine, J., Crubézy, E. & Ludes, B. 2011. Ancient DNA Suggests the Leading Role Played by Men in the Neolithic Dissemination. *Proceedings of the National Academy of Sciences*, **108**: 18255–59. CrossRef (<http://dx.doi.org/10.1073/pnas.1113061108>) |

Google Scholar (https://scholar.google.com/scholar_lookup?title=Ancient+DNA+Suggests+the+Leading+Rc X.&author=Brucato+N.&author=Tarr%C3%BAs+J.&author=Bosch+A.&author=Guilaine+J.&author=Crub%C3: | PubMed (<https://www.ncbi.nlm.nih.gov/pubmed/22042855>)

Lillios, K.T. 2000. A Biographical Approach to the Ethnogeology of Late Prehistoric Portugal. *Trabajos de Prehistoria*, **57** (1): 19–28. CrossRef (<http://dx.doi.org/10.3989/tp.2000.v57.i1.259>) |

Google Scholar (https://scholar.google.com/scholar_lookup?title=A+Biographical+Approach+to+the+Ethnogeology+of+Late+Prehistoric+Portugal&publication+year=20128)

Lillios, K.T., Read, C. & Alves, F. 2000. The Axe of the Óbidos Lagoon (Portugal): An Uncommon Find Recovered during an Underwater Archaeological Survey (1999). *Revista Portuguesa de Arqueologia*, **1** (3): 5–14.

Google Scholar ([https://scholar.google.com/scholar_lookup?title=The+Axe+of+the+%C3%93bidos+Lagoon+\(Portugal\):+An+Uncommon+Find+Recovered+during+an+Underwater+Archaeological+Survey+\(1999\)&publication+year=2000&author=Lillios+K.T.&author=Read+C.&author=Alves+F.&journal=Revista+Po14](https://scholar.google.com/scholar_lookup?title=The+Axe+of+the+%C3%93bidos+Lagoon+(Portugal):+An+Uncommon+Find+Recovered+during+an+Underwater+Archaeological+Survey+(1999)&publication+year=2000&author=Lillios+K.T.&author=Read+C.&author=Alves+F.&journal=Revista+Po14))

Lubell, D., Jackes, M., Schwarcz, H., Knyf, M. & Meiklejohn, C. 1994. The Mesolithic-Neolithic Transition in Portugal: Isotopic and Dental Evidence of Diet. *Journal of Archaeological Science*, **21**: 201–16.

CrossRef (<http://dx.doi.org/10.1006/jasc.1994.1022>) |

Google Scholar (https://scholar.google.com/scholar_lookup?title=The+Mesolithic-Neolithic+Transition+in+Portugal:+Isotopic+and+Dental+Evidence+of+Diet&publication+year=1994&author

Maurer, A.-F., Stephen, J.G., Galer, C.K., Beierlein, L., Nunn, E.V., Peters, D., Tutken, T., Alt, K.W. & Schöne, B.R. 2012. Bioavailable $^{87}\text{Sr}/^{86}\text{Sr}$ in Different Environmental Samples: Effects of Anthropogenic Contamination and Implications for Isoscapes in Past Migration Studies. *Science of the Total Environment*, **433**: 216–29. CrossRef (<http://dx.doi.org/10.1016/j.scitotenv.2012.06.046>) |

Google Scholar (https://scholar.google.com/scholar_lookup?title=Bioavailable+87Sr/86Sr+in+Different+Environmental+Samples:+Effects+of+Anthropogenic+Contamina+F.&author=Stephen+J.G.&author=Galer+C.K.&author=Beierlein+L.&author=Nunn+E.V.&author=Peters+D.&author=Tutken+T.&author=Alt+K.W.&author=Schone+B.R.) | PubMed (<https://www.ncbi.nlm.nih.gov/pubmed/22796412>)

Montgomery, J. 2010. Passports from the Past: Investigating Human Dispersals Using Strontium Isotope Analysis of Tooth Enamel. *Annals of Human Biology*, **37**: 325–46.

CrossRef (<http://dx.doi.org/10.3109/03014461003649297>) |

Google Scholar (https://scholar.google.com/scholar_lookup?title=Passports+from+the+Past:+Investigating+Human+Dispersals+Using+Strontium+Isotope+Analysis+of+Tooth+Enamel) | PubMed (<https://www.ncbi.nlm.nih.gov/pubmed/20367186>)

Montgomery, J., Evans, J.A. & Wildman, G. 2006. $^{87}\text{Sr}/^{86}\text{Sr}$ Isotope Composition of Bottled British Mineral Waters for Environmental and Forensic Purposes. *Applied Geochemistry*, **21**: 1626–34.

CrossRef (<http://dx.doi.org/10.1016/j.apgeochem.2006.07.002>) |

Google Scholar (https://scholar.google.com/scholar_lookup?title=87Sr/86Sr+Isotope+Composition+of+Bottled+British+Mineral+Waters+for+Environmental+and+Forensic+Purposes)

Neves, C. 2013. A evolução do processo de neolitização numa paisagem estuarina: a ocupação do Monte da Foz 1 (Benavente, Portugal). In: Soares, J., ed. *Pré-História das zonas húmidas. Paisagens de sal*. Setúbal: MAEDS, pp. 123–44.

Google Scholar ([https://scholar.google.com/scholar_lookup?title=A+evolu%C3%A7%C3%A3o+do+processo+de+neolitiza%C3%A7%C3%A3o+numa+paisagem+estuarina:+\(Benavente+Portugal\)&publication+year=2013&author=Neves+C.&author=Soares+J.](https://scholar.google.com/scholar_lookup?title=A+evolu%C3%A7%C3%A3o+do+processo+de+neolitiza%C3%A7%C3%A3o+numa+paisagem+estuarina:+(Benavente+Portugal)&publication+year=2013&author=Neves+C.&author=Soares+J.))

Pétrequin, P., Errera, M., Martin, A., Fábregas, R. & Vaquer, J. 2012. Les haches en jades alpines pendant les Ve et IVe millénaires. L'exemple de l'Espagne et du Portugal dans une perspective européenne. In: Borrell, M., Borrell, F., Bosch, J., Clop, X. and Molist, M., eds. *Xarxes al Neolític. Circulació i intercanvi de matèries, productes i idees a la Mediterrània occidental (VII-III mil·lenni a.C.)*. Barcelona: Museu d'Arqueologia de Catalunya, pp. 213–22.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Les+haches+en+jades+alpines+pendant+les+Ve+et+IVe+mill%C3%A9naires.+L'exemple+de+l'Espagne)

Pimenta, C. 2014. Microvertebrates. In: Carvalho, A.F., ed. *Bom Santo Cave (Lisbon) and the Middle Neolithic Societies of Southern Portugal*. Faro: Universidade do Algarve, pp. 81–76.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Microvertebrates&publication+year=2014&author=Pimenta+C.&author=Carvalho+A.F.)

Price, T.D., ed. 1989. *The Chemistry of Prehistoric Human Bone*. Cambridge: Cambridge University Press.

Google Scholar (https://scholar.google.com/scholar_lookup?title=The+Chemistry+of+Prehistoric+Human+Bone&publication+year=1989&author=Price+T.D.)

Price, T.D. 2014. Isotope Proveniencing. In: Carvalho, A.F., ed. *Bom Santo Cave (Lisbon) and the Middle Neolithic Societies of Southern Portugal*. Faro: Universidade do Algarve, pp. 151–58.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Isotope+Proveniencing&publication+year=2014&author=Price+T.D.&author=Carvalho+A.F.)

Price, T.D., Bentley, R.A., Lünning, J., Gronenborg, D. & Wahl, J. 2001. Prehistoric Human Migration in the Linearbandkeramik of Central Europe. *Antiquity*, **75**: 593–603.

CrossRef (<http://dx.doi.org/10.1017/S0003598X00088827>) |
Google Scholar (https://scholar.google.com/scholar_lookup?title=Prehistoric+Human+Migration+in+the+Linearbandkeramik+of+Central+Europe&publication+year=200603)

Price, T.D., Burton, J.H. & Bentley, A.R. 2002. The characterisation of biologically available strontium isotope ratios for the study of prehistoric migration. *Archaeometry*, **44**: 117–35.

CrossRef (<http://dx.doi.org/10.1111/1475-4754.00047>) |
Google Scholar (https://scholar.google.com/scholar_lookup?title=The+characterisation+of+biologically+available+strontium+isotope+ratios+for+the+study+of+prehisto4754.00047)

Price, T.D., Grupe, G. & Schröter, P. 1994. Reconstruction of Migration Patterns in the Bell Beaker Period by Stable Strontium Isotope Analysis. *Applied Geochemistry*, **9**: 413–7.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Reconstruction+of+Migration+Patterns+in+the+Bell+Beaker+Period+by+Stable+Strontium+Isotope+Ar)

Queiroz, P.F. & Mateus, J.E. 2014. Carbonized Plant Remains. In: Carvalho, A.F., ed. *Bom Santo Cave (Lisbon) and the Middle Neolithic Societies of Southern Portugal*. Faro: Universidade do Algarve, pp. 29–44.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Carbonized+Plant+Remains&publication+year=2014&author=Queiroz+P.F.&author=Mateus+J.E.&auth44)

Reimer, P.J., Bard, E., Bayliss, A., Beck, J.W., Blackwell, P.G., Bronk-Ramsey, C., Buck, C.E., Cheng, H., Edwards, R.L., Friedrich, M., Grootes, P.M., Guilderson, T.P., Haflidason, H., Hajdas, I., Hatté, C., Heaton, T.J., Hoffman, D.L., Hogg, A.G., Hughen, K.A., Kaiser, K.F., Kromer, B., Manning, S.W., Niu, M., Reimer, R.W., Richards, D.A., Scott, E.M., Southon, J.R., Staff, R.A., Turney, C.S.M. & van der Plicht, J. 2013. IntCal13 and Marine13 Radiocarbon Age Calibration Curves, 0–50,000 years cal BP. *Radiocarbon*, **55** (4): 1869–87.

[CrossRef \(http://dx.doi.org/10.2458/azu_js_rc.55.16947\)](http://dx.doi.org/10.2458/azu_js_rc.55.16947) |

Google Scholar (https://scholar.google.com/scholar_lookup?title=IntCal13+and+Marine13+Radiocarbon+A+Ramsey+C.&author=Buck+C.E.&author=Cheng+H.&author=Edwards+R.L.&author=Friedrich+M.&author=Gr

Ribeiro, C. 1884. Les kjoekkenmoedings de la vallée du Tage. *Congrès International d'Anthropologie et d'Archéologie Préhistoriques*. Lisbonne: Académie Royale des Sciences, pp. 279–290.

Google Scholar ([https://scholar.google.com/scholar_lookup?](https://scholar.google.com/scholar_lookup?title=Les+kjoekkenmoedings+de+la+vall%C3%A9e+du+Tage&publication+year=1884&author=Ribeiro+C.&p)

[title=Les+kjoekkenmoedings+de+la+vall%C3%A9e+du+Tage&publication+year=1884&author=Ribeiro+C.&p.290\)](https://scholar.google.com/scholar_lookup?title=Les+kjoekkenmoedings+de+la+vall%C3%A9e+du+Tage&publication+year=1884&author=Ribeiro+C.&p)

Rocha, L. 1999. *Povoamento megalítico de Pavia. Contributo para o conhecimento da Pré-História regional*. Pavia: Câmara Municipal de Pavia.

Google Scholar ([https://scholar.google.com/scholar_lookup?](https://scholar.google.com/scholar_lookup?title=Povoamento+megal%C3%ADtico+de+Pavia.+Contributo+para+o+conhecimento+da+Pr%C3%A9-Hist%C3%B3ria+regional&publication+year=1999&author=Rocha+L.)

[title=Povoamento+megal%C3%ADtico+de+Pavia.+Contributo+para+o+conhecimento+da+Pr%C3%A9-Hist%C3%B3ria+regional&publication+year=1999&author=Rocha+L.\)](https://scholar.google.com/scholar_lookup?title=Povoamento+megal%C3%ADtico+de+Pavia.+Contributo+para+o+conhecimento+da+Pr%C3%A9-Hist%C3%B3ria+regional&publication+year=1999&author=Rocha+L.)

Rocha, L. 2001. Povoamento pré-histórico da área de Pavia. *Revista Portuguesa de Arqueologia*, **4** (1): 17–44.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Povoamento+pr%C3%A9-hist%C3%B3rico+da+%C3%A1rea+de+Pavia&publication+year=2001&author=Rocha+L.&journal=Revista+Po

[44\)](https://scholar.google.com/scholar_lookup?title=Povoamento+pr%C3%A9-hist%C3%B3rico+da+%C3%A1rea+de+Pavia&publication+year=2001&author=Rocha+L.&journal=Revista+Po)

Rodrigues, F. 2006. Moita do Ourives: um habitat do Neolítico médio no Baixo Tejo. *IV Congresso de Arqueologia Peninsular*. Do Epipaleolítico ao Calcolítico na Península Ibérica. Faro: Universidade do Algarve, pp. 249–62.

Google Scholar ([https://scholar.google.com/scholar_lookup?](https://scholar.google.com/scholar_lookup?title=Moita+do+Ourives:+um+habitat+do+Neol%C3%ADtico+m%C3%A9dio+no+Baixo+Tejo&publication+ye)

[title=Moita+do+Ourives:+um+habitat+do+Neol%C3%ADtico+m%C3%A9dio+no+Baixo+Tejo&publication+ye](https://scholar.google.com/scholar_lookup?title=Moita+do+Ourives:+um+habitat+do+Neol%C3%ADtico+m%C3%A9dio+no+Baixo+Tejo&publication+ye)

Sampietro, M.L., Lao, O., Caramelli, D., Lari, M., Pou, R., Martí, M., Bertranpetit, J. & Lalueza-Fox, C. 2007.

Palaeogenetic Evidence Supports a Dual Model of Neolithic Spreading into Europe. *Proceedings of the Royal Society*, **274**: 2161–67. [CrossRef \(http://dx.doi.org/10.1098/rspb.2007.0465\)](http://dx.doi.org/10.1098/rspb.2007.0465) |

Google Scholar ([https://scholar.google.com/scholar_lookup?](https://scholar.google.com/scholar_lookup?title=Palaeogenetic+Evidence+Supports+a+Dual+Model+of+Neolithic+Spreading+into+Europe&publication)

[title=Palaeogenetic+Evidence+Supports+a+Dual+Model+of+Neolithic+Spreading+into+Europe&publication](https://scholar.google.com/scholar_lookup?title=Palaeogenetic+Evidence+Supports+a+Dual+Model+of+Neolithic+Spreading+into+Europe&publication)

[Fox+C.&journal=Proceedings+of+the+Royal+Society&volume=274&doi=10.1098/rspb.2007.0465\)](https://scholar.google.com/scholar_lookup?title=Palaeogenetic+Evidence+Supports+a+Dual+Model+of+Neolithic+Spreading+into+Europe&publication)

| PubMed (<https://www.ncbi.nlm.nih.gov/pubmed/17609193>)

Sillen, A. & Kavanagh, M. 1982. Strontium and Paleodietary Research: A Review. *Yearbook of Physical Anthropology*, **25**: 67–90. [CrossRef \(http://dx.doi.org/10.1002/ajpa.1330250505\)](http://dx.doi.org/10.1002/ajpa.1330250505) |

Google Scholar ([https://scholar.google.com/scholar_lookup?](https://scholar.google.com/scholar_lookup?title=Strontium+and+Paleodietary+Research:+A+Review&publication+year=1982&author=Sillen+A.&author)

[title=Strontium+and+Paleodietary+Research:+A+Review&publication+year=1982&author=Sillen+A.&author:90\)](https://scholar.google.com/scholar_lookup?title=Strontium+and+Paleodietary+Research:+A+Review&publication+year=1982&author=Sillen+A.&author)

Sillen, A., Sealy, J.C. & Van Der Merwe, N.J. 1998. Chemistry and Paleodietary Research. No more Easy Answers. *American Antiquity*, **54**: 504–12.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Chemistry+and+Paleodietary+Research.+No+more+Easy+Answers&publication+year=1998&author=Si)

Sjögren, K.-G., Price, T.D. & Ahlström, T. 2009. Megaliths and Mobility in South-Western Sweden. Investigating Relationships between a Local Society and its Neighbours Using Strontium Isotopes. *Journal of Anthropological Archaeology*, **28**: 85–101. CrossRef (<http://dx.doi.org/10.1016/j.jaa.2008.10.001>) | Google Scholar (https://scholar.google.com/scholar_lookup?title=Megaliths+and+Mobility+in+South-Western+Sweden.+Investigating+Relationships+between+a+Local+Society+and+its+Neighbours+Using+Str+G.&author=Price+T.D.&author=Ahlstr%C3%B6m+T.&journal=Journal+of+Anthropological+Archaeology&vol)

Slovak, N.M. & Paytan, A. 2011. Applications of Sr Isotopes in Archaeology. *Advances in Isotope Geochemistry*, **5**: 743–68.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Applications+of+Sr+Isotopes+in+Archaeology&publication+year=2011&author=Slovak+N.M.&author=f)

Spindler, K. 1981. *Cova da Moura. Die Besiedlung des atlantischen Küstengebietes Mittelportugals vom Neolithikum bis an das Ende der Bronzezeit*. Mainz: von Zabern.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Cova+da+Moura.+Die+Besiedlung+des+atlantischen+K%C3%BCstengebietes+Miittelportugals+vom+N)

Valente, M.J. & Carvalho, A.F. 2014. Zooarchaeology in the Neolithic and Chalcolithic of Southern Portugal. *Environmental Archaeology*, **19** (3): 226–40. CrossRef (<http://dx.doi.org/10.1179/1749631414Y.0000000022>)

Google Scholar (https://scholar.google.com/scholar_lookup?title=Zooarchaeology+in+the+Neolithic+and+Chalcolithic+of+Southern+Portugal&publication+year=2014&)

Valera, A.C. 2012. Ditches, Pits and Hypogea: New Data and New Problems in South Portugal Late Neolithic and Chalcolithic Funerary Practices. In: Gibaja, J.F., Carvalho, A.F. and Chambon, P., eds. *Funerary Practices in the Iberian Peninsula from the Mesolithic to the Chalcolithic (British Archaeological Reports International Series, 2417)*. Oxford: Archaeopress, pp. 103–112.

Google Scholar (https://scholar.google.com/scholar_lookup?title=Ditches+Pits+and+Hypogea:+New+Data+and+New+Problems+in+South+Portugal+Late+Neolithic+and+112)

Van Klinken, G.J., Richards, M.P. & Hedges, R.E.M. 2000. An Overview of Causes for Stable Isotopic Variations in past European Human Populations: Environmental, Ecophysiological and Cultural Effects. In: Ambrose, S.H. and Katzenberg, H.A., eds. *Biogeochemical Approaches to Paleodietary Analysis*. New York: Kluwer Academic/Plenum, pp. 39–63.

Google Scholar (https://scholar.google.com/scholar_lookup?title=An+Overview+of+Causes+for+Stable+Isotopic+Variations+in+past+European+Human+Populations:+Er+63)

Vis, G.-J. & Kasse, C. 2009. Late Quaternary Valley-Fill Succession of the Lower Tagus Valley, Portugal. *Sedimentary Geology*, **221**: 19–39. CrossRef (<http://dx.doi.org/10.1016/j.sedgeo.2009.07.010>) |

Google Scholar (https://scholar.google.com/scholar_lookup?title=Late+Quaternary+Valley-Fill+Succession+of+the+Lower+Tagus+Valley+Portugal&publication+year=2009&author=Vis+G.-J.&author=Kasse+C.&journal=Sedimentary+Geology&volume=221&doi=10.1016/j.sedgeo.2009.07.010&page=39)

Vis, G.-J., Kasse, C. & Vandenberghe, J. 2008. Late Pleistocene and Holocene Palaeogeography of the Lower Tagus Valley (Portugal): Effects of Relative Sea Level, Valley Morphology and Sediment Supply. *Quaternary Science Reviews*, **27**: 1682–709. CrossRef (<http://dx.doi.org/10.1016/j.quascirev.2008.07.003>) | Google Scholar ([https://scholar.google.com/scholar_lookup?title=Late+Pleistocene+and+Holocene+Palaeogeography+of+the+Lower+Tagus+Valley+\(Portugal\):+Effects+of+Relative+Sea+Level+Valley+Morphology+and+Sediment+Supply&publication+year=2008&author=Kasse+C.&author=Vandenberghe+J.&journal=Quaternary+Science+Reviews&volume=27&doi=10.1016/j.quascirev.2008.07.003](https://scholar.google.com/scholar_lookup?title=Late+Pleistocene+and+Holocene+Palaeogeography+of+the+Lower+Tagus+Valley+(Portugal):+Effects+of+Relative+Sea+Level+Valley+Morphology+and+Sediment+Supply&publication+year=2008&author=Kasse+C.&author=Vandenberghe+J.&journal=Quaternary+Science+Reviews&volume=27&doi=10.1016/j.quascirev.2008.07.003))

Waterman, A.J., Peate, D.W., Silva, A.M. & Thomas, J.T. 2014. In Search of Homelands: Using Strontium Isotopes to Identify Biological Markers of Mobility in Late Prehistoric Portugal. *Journal of Archaeological Science*, **42**: 119–27. CrossRef (<http://dx.doi.org/10.1016/j.jas.2013.11.004>) | Google Scholar (https://scholar.google.com/scholar_lookup?title=In+Search+of+Homelands:+Using+Strontium+Isotopes+to+Identify+Biological+Markers+of+Mobility+in+Late+Prehistoric+Portugal&publication+year=2014&author=Waterman+A.J.&author=Peate+D.W.&author=Silva+A.M.&author=Thomas+J.T.&journal=Journal+of+Archaeological+Science&volume=42&pages=119-27&doi=10.1016/j.jas.2013.11.004)

Zvelebil, M. 2000. The Social Context of the Agricultural Transition in Europe. In: Renfrew, C. & Boyle, K., eds. *Archaeogenetics: DNA and the Population Prehistory of Europe*. Cambridge: Cambridge University Press, pp. 57–79. Google Scholar (https://scholar.google.com/scholar_lookup?title=The+Social+Context+of+the+Agricultural+Transition+in+Europe&publication+year=2000&author=Zvelebil+M.&journal=Archaeogenetics:+DNA+and+the+Population+Prehistory+of+Europe&pages=57-79&doi=10.1017/S000368010000579)