

MAIA CASNA, PhD

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RESEARCH PROFILE

I am a Postdoctoral Researcher in **Bioarchaeology** specializing in **Paleopathology** and **Health Inequality** in the past. I have broad expertise in analyzing human skeletal remains to reconstruct socioeconomic phenomena such as health disparities, the effects of urbanization, and the systemic impact of **intoxicants** (e.g., tobacco) on human populations across various historical periods.

ACADEMIC APPOINTMENTS

- **Postdoctoral Research Associate, ERC Project PollutedPast** 2025 – Present
Centre for Interdisciplinary Research in Environmental Technologies (CRETUS), University of Santiago de Compostela

TECHNICAL EXPERTISE

- **Osteological analysis**
Paleopathology, Dental indicators of tobacco use, Life-course and embodiment approaches
- **Biomolecular Analysis**
Trace metal analysis in bone, Stable isotope analysis (diet and mobility)
- **Radiological Imaging**
CT-based paleopathology, Micro-CT
- **Quantitative methods**
Logistic regression, Non-parametric statistics, R

EDUCATION

- **PhD Osteoarchaeology, cum laude** 2021 – 2025
Faculty of Archaeology, Leiden University
- **MSc Archaeological Science, cum laude** 2018 – 2019
Faculty of Archaeology, Leiden University
- **BA Cultural Anthropology** 2013 – 2017
Department of History and Cultures, University of Bologna

MONOGRAPHS

- [1] **Maia Casna** (2025). **The air we breathe: a study into the impact of historical socioeconomic changes on the respiratory health of past Dutch populations (ca. 470-1850 CE)**. *Doctoral Dissertation, Leiden University*.
<https://hdl.handle.net/1887/4250305>

PUBLICATIONS (*student collaboration)

J=JOURNAL ARTICLE, B=BOOK CHAPTER

- [J.15] Qingxin Fu*, **Maia Casna**, Sarah A. Schrader, Yuran Niu, Yanguo Qin, Haiyang Xing, Long Wang, Quanchao Zhang (2026). **An Analysis of Frontal Sinusitis in Three Ancient Populations From the Turpan Basin, Xinjiang, China**. *International Journal of Osteoarchaeology*, 0, 0-10. DOI: 10.1002/oa.70104
- [J.14] Alice Cusan, **Maia Casna**, and Giovanni Magno (2025). **An early twentieth-century case of lower lip cancer from the Morgagni Museum (Padua, Italy)**. *memo - Magazine of European Medical Oncology*, 18, 320-323. DOI: 10.1007/s12254-025-01072-1
- [J.13] Anna M. Davies-Barrett, **Maia Casna**, and Sarah A. Inskip (2025). **"A custome lothsome": Investigating the association between tobacco consumption and respiratory inflammation in two post-medieval English populations (c. CE 1500–1855)**. *PLOS One*, 20(5), e0324045. DOI: 10.1371/journal.pone.0324045
- [J.12] **Maia Casna**, and Sarah A. Schrader (2025). **Historical Trends and Risk Factors in Chronic Maxillary Sinusitis Among Dutch Pre-Adults (475–1866 CE)**. *American Journal of Biological Anthropology*, 186(4), e70050. DOI: 10.1002/ajpa.70050
- [J.11] **Maia Casna**, Anna M. Davies-Barrett, and Sarah A. Schrader (2024). **Exploring the impact of tobacco consumption on the respiratory health of two Dutch skeletal populations (1300–1829 CE)**. *World Archaeology*, 55(5), 508-525. DOI: 10.1080/00438243.2024.2425814
- [J.10] Veronica Pace*, **Maia Casna**, and Sarah A. Schrader (2024). **Using computed tomography to diagnose chronic frontal sinusitis in the skeletal remains of a post-medieval Dutch rural community (AD 1829–1866)**. *Journal of Archaeological Science*, 170, 106041. DOI: 10.1016/j.jas.2024.106041

- [J.9] **Maia Casna**, Anna M. Davies-Barrett, and Sarah A. Schrader (2024). **Smoking histories: a bioarchaeological approach to tobacco consumption in two skeletal populations from The Netherlands (1300-1829 CE)**. *Post-Medieval Archaeology*, 58(1), 1–13. DOI: 10.1080/00794236.2024.2355461
- [J.8] Bjørn P. Bartholdy, ..., **Maia Casna**, et al. (2024). **Multiproxy analysis exploring patterns of diet and disease in dental calculus and skeletal remains from a 19th century Dutch population**. *Peer Community Journal*, 4, e46. DOI: 10.24072/pcjournal.414
- [J.7] **Maia Casna**, and Sarah A. Schrader (2024). **Chronic Maxillary Sinusitis: A comparison of osteological and CT methods of diagnosis**. *International Journal of Paleopathology*, 45, 30-34. DOI: 10.1016/j.ijpp.2024.04.001
- [J.6] **Maia Casna**, and Sarah A. Schrader (2024). **The urban sea: Cribra orbitalia, porotic hyperostosis, linear enamel hypoplasia, and sinusitis in three diachronic urban sites from the Dutch province of Zeeland (1030–1800 CE)**. *International Journal of Osteoarchaeology*, 34(3), e3302. DOI: 10.1002/oa.3302
- [J.5] **Maia Casna**, Joost J. H. Roelofs, Rachel Schats, et al. (2024). **Association between morphological features in the cochlear promontory and mastoid process: implications for identifying middle ear diseases in human skeletal remains**. *Journal of Archaeological Science: Reports*, 56, 104538. DOI: 10.1016/j.jasrep.2024.104538
- [J.4] Anna M. Davies-Barrett, **Maia Casna**, Derek Boyd, and Sarah A. Inskip. (2024). **An analysis of interobserver variability in the recording of maxillary sinusitis in human osteoarchaeological remains**. *International Journal of Osteoarchaeology*, 34(2), e3293. DOI: 10.1002/oa.3293
- [J.3] **Maia Casna**, Rachel Schats, Menno L. P. Hoogland, and Sarah A. Schrader (2023). **A distant city: assessing the impact of Dutch socioeconomic developments on urban and rural health using respiratory disease as a proxy**. *International Journal of Paleopathology*, 42, 34-45. DOI: 10.1016/j.ijpp.2023.07.003
- [J.2] **Maia Casna**, and Sarah A. Schrader (2022). **Urban beings: a bioarchaeological approach to socioeconomic status, cribra orbitalia, porotic hyperostosis, linear enamel hypoplasia, and sinusitis in the early-modern Northern Low Countries (A.D. 1626–1850)**. *Bioarchaeology International*, 6(4), 217-232. DOI: 10.5744/bi.2022.0001
- [J.1] **Maia Casna**, Carla L. Burrell, Rachel Schats, Menno L. P. Hoogland, and Sarah A. Schrader (2021). **Urbanization and respiratory stress in the Northern Low Countries: a comparative study of chronic maxillary sinusitis in two early modern sites from the Netherlands (AD 1626–1866)**. *International Journal of Osteoarchaeology*, 31(5), 891-901. DOI: 10.1002/oa.3006

RESEARCH FUNDING

• Interdisciplinary Research Center in Environmental Technologies (CRETUS) <i>Programa de promoción internacional, funding a research visit at Stockholm University (€1,500)</i>	2026
• Barge's Anthropologica <i>"Population density and respiratory health: a comparative study of ancient Apulian populations" (€750)</i>	2024
• Stichting Nederlands Museum voor Anthropologie en Praehistorie <i>"Biomolecular insights into the history of sugar consumption in two Dutch populations (1448–1802 CE)" (€7,000)</i>	2024
• Leids Universiteits Fonds <i>Studieverblijf (€555)</i>	2024
• British Association for Biological Anthropology and Osteoarchaeology <i>"Child morbidity and health in adulthood: using ear infection as a proxy to identify past life-course connections" (£675)</i>	2022
• Barge's Anthropologica <i>"Child morbidity and health in adulthood: using ear infection as a proxy to identify past life-course connections" (€750)</i>	2022
• Dutch Research Council (NWO) <i>PhD Humanities – "A study into the impact of socioeconomic changes on the respiratory health of past Dutch populations" (€265,000)</i>	2021

TEACHING

• Leiden University <i>Teaching Assistant / Lecturer</i>	2020 – 2025
◦ Advanced Osteoarchaeology	
◦ Bioarchaeology	
◦ MSc Archaeological Science Internship (Focus Osteoarchaeology)	
◦ Landscape Dynamics	

VISITING FELLOWSHIPS

- **Leiden University, Faculty of Archaeology** Guest Researcher, 2025 – Present
- **Purdue University, Department of Anthropology** Visiting Researcher, 2025
- **Università del Salento, School of Humanities and Cultural Heritage Studies** Visiting Researcher and Internship Supervisor, 2024 – 2025
- **University of Leicester, School of Archaeology** Research Visit, 2022

LABORATORY AND FIELD EXPERIENCE

- **Jebel Qurma Project (Azraq, Jordan)** 2023 – Present
Lead Osteoarchaeologist
- **Department Materials Science and Engineering, TU Delft** 2020
Research Assistant

AWARDS

- **The (Dutch) University Teaching Qualification, Basis Kwalificatie Onderwijs (BKO)** 2024
Leiden University
- **Eve Cockburn Award for the best student podium presentation** 2024
Paleopathology Association
- **Early Career Achievement Prize, honorary mention** 2024
Oscar Montelius Foundation, European Association of Archaeologists
- **NVFA Incentive Prize** 2022
Nederlandse Vereniging voor Fysische Antropologie
- **Jane Moore Prize for the best student podium presentation** 2021
British Association for Biological Anthropology and Osteoarchaeology
- **Bill White Prize for the best student poster presentation, runner-up** 2019
British Association for Biological Anthropology and Osteoarchaeology

INVITED LECTURES AND KEYNOTES

I=INVITED LECTURE, K=KEYNOTE

- [I.5] **Maia Casna** (2025). Breaking Bones, Breaking Bias How Human Skeletons Challenge Gender Stereotypes in Archaeology. *Netherlands Bureau for Economic Policy Analysis*.
- [I.4] **Maia Casna** (2024). Breathing through time: exploring the impact of urbanization onto the respiratory health of past Dutch populations. *Nederlandse Vereniging voor Fysische Antropologie Annual Lecture*.
- [I.3] **Maia Casna** (2024). Soffi urbani: Approcci osteologici alla storia della salute respiratoria nei Paesi Bassi (475-1850 CE). *School of Humanities and Cultural Heritage Studies, Univeristá del Salento*.
- [I.2] **Maia Casna** (2023). A city's breath: Unveiling Historical Respiratory Health in the Northern Low Countries (475-1850 CE). *Stichting Reuvens, Reweensdagen*.
- [I.1] **Maia Casna** (2022). In one ear and out the nose: Investigating correlation between otitis media and chronic maxillary sinusitis in a post-medieval population from the Netherlands (AD 1500-1850). *University of Bristol*.

SELECTION CONFERENCE PRESENTATIONS (*last 5 years; *student collaboration*) P=PODIUM, T=POSTER

- [P.6] Allegra Rafaschieri*, Rachel Schats, and **Maia Casna** (2025). Prevalence of hallux valgus and osteoarthritis in two post-medieval populations from The Netherlands: A shoe problem? *BABAO 26th Annual Meeting*.
- [T.6] **Maia Casna**, Michele Buzon, and Sarah A. Schrader (2025). Tracing respiratory health and sociopolitical change at Tombos, Third Cataract (1400-1600 BCE). *BABAO 26th Annual Meeting*.
- [P.5] **Maia Casna**, and Sarah A. Schrader (2024). Investigating Sinusitis Prevalence among sexes in Three Socioeconomic Groups in the Post-Medieval Netherlands: A Sex-Stratified Analysis. *EAA Annual Meeting*.
- [T.5] **Maia Casna**, Giovanni Mastronuzzi, Francesco Solinas, and Giorgia Tulumello (2024). A comparative study of chronic maxillary sinusitis and otitis media among two ancient Italian populations from pre-Roman to Late Antique Periods (5th century BCE-6th century CE). *24th Paleopathology Association European Meeting*.
- [P.4] **Maia Casna**, Anna M. Davies-Barrett, and Sarah A. Schrader (2024). A study into the Impact of Tobacco Consumption on the Respiratory Health of two Dutch Skeletal Samples (1600-1829 CE). *24th Paleopathology Association European Meeting*.
- [T.4] **Maia Casna**, Anna M. Davies-Barrett, and Sarah A. Schrader (2024). Bioarchaeological approaches to female tobacco consumption in two skeletal populations from the Netherlands (1300-1829 CE). *Paleopathology Association 50th Northern American Annual Meeting*.
- [P.3] **Maia Casna**, Joost J. H. Roelofs, Rachel Schats, Berit Verbist, and Tjasse D. Bruintjes (2023). Reliability of Cochlear Promontory Observation in Studying Ear Infections in Archaeological Human Skeletal Remains. *BABAO 24th Annual Conference*.
- [P.2] Veronica Pace*, **Maia Casna**, and Sarah A. Schrader (2022). Imaging for headache: using CT scans to diagnose chronic frontal sinusitis in a Dutch post-medieval rural community (AD 1829-1866). *BABAO 23rd Annual Conference*.
- [T.3] Tamara Merjasec*, **Maia Casna**, and Sarah A. Schrader (2022). A comparative bioarchaeological study of Chronic Frontal Sinusitis in two post-medieval populations from the Netherlands (AD 1626-1866). *BABAO 23rd Annual Conference*.

- [T.2] **Maia Casna**, and Sarah A. Schrader (2022). Chronic maxillary sinusitis: a comparison of osteological and radiological methods of diagnosis. *23rd Paleopathology Association European Meeting*.
- [P.1] **Maia Casna**, and Sarah A. Schrader (2021). Beings in the city: a bioarchaeological approach to socioeconomic status, stress markers, and sinusitis in three early-modern Dutch towns (1626-1850 AD). *BABAO 22nd Annual Conference*.
- [T.1] **Maia Casna**, and Sarah A. Schrader (2021). In one ear and out the nose: Investigating correlation between otitis media and chronic maxillary sinusitis in a post-medieval population from the Netherlands (1500-1850 AD). *22nd Paleopathology Association American Meeting*.

CONFERENCE HOST

- **SoYA: Symposium of Young Archaeologists** 2026
Leiden, 10 April 2026, ±100 guests
- **Paleopathology Association, European Meeting** 2024
Leiden, 22-24 August 2024, ±300 guests

CONFERENCE SESSIONS ORGANIZED

- **All in One Breath: (Bio)Archaeological Approaches to Respiratory Diseases**
August 2024; Rome, Italy
- **Forgotten Bodies, Invisible Histories: Addressing Overlooked Human Narratives in the Archaeological Record**
August 2023; Belfast, Northern Ireland
- **Revealing the Many Narratives of Tobacco: Towards an Interdisciplinary Archaeology of Tobacco and Consumption**
August 2023; Belfast, Northern Ireland

PROFESSIONAL ACTIVITIES AND SERVICE

U=UNIVERSITY SERVICE, P=PROFESSIONAL SERVICE

- [U.4] **Student Thesis Supervision at Leiden University**. 7 MSc thesis supervised (titles upon request). *Tamara Merjasec (2021), Veronica Pace (2022), Laura Vranješ (2023), Lyann Pieters (2024), Allegra Rafaschieri (2025), Autum Medelen (2025), Maria Farmaki (in prep.)*.
- [U.3] **Faculty Council Member at Leiden University** (2022 - 2025). Elected member for the Research and PhD portfolios.
- [P.1] **Grants Secretary** (2024 - Present). British Association for Biological Anthropology and Osteoarchaeology.
- [U.2] **Editor-in-Chief Inter-Section** (2021-2025). Served as editorial board member and editor-in-chief for the peer-reviewed faculty journal at Leiden University.
- [U.1] **Diversity and Inclusion Committee Chair** (2021 - 2024). *Faculty of Archaeology, Leiden University*.

REVIEWER

- PLOS One
- Journal of Archaeological Science
- International Journal of Paleopathology
- International Journal of Osteoarchaeology
- Open Archaeology
- F1000Research

MUSEUM ACTIVITIES

- **Lego Lost at Sea, Museum Exhibition** 2025
Faculty of Archaeology, Leiden University
- **Digital facial reconstruction of a case of syphilis** 2019
Part of "ArtArchaeology Exhibition", Leiden University

OUTREACH (*selection*)

A=ARTICLE ON MAGAZINE, K=KIDS ACTIVITY, P=PODCAST, T=TALK, M=MEDIA APPEARANCE

- [K.6] 2025. **Encontros na zona USC**. *Laboratory activities organized to introduce high school students from Santiago de Compostela to scientific research.*
- [K.5] 2024. **3 October University**. *Bones Lab set up during public science fair to teach children about the human skeleton.*
- [K.4] 2023-2024. **Letter to Pre-scientis**. *International outreach project connecting students to STEM professionals through snail mail to broaden students awareness of what scientists from all over the world do.*
- [A.3] 2023. **Ademhalen in de stad**. *Interview in Archeologie Magazine.*
- [K.3] 2023. **Online osteoarchaeology class** for middle-school kids. *Rosetta Rossi School (Rome, Italy).*
- [A.2] 2023. **Respiratory Diseases and Their Contribution to Understand the Human Past**. *Contribution to the SAS Bulletin Online.*
- [P.1] 2022. **The Archaeology of Respiratory Diseases with Maia Casna**. *Podcast episode on Wetenschappelijke Wezens.*
- [K.2] 2022. Dag van de doden. **Murder-mystery workshop** for students aged 12+ where they were asked to solve a cold case with (plastic) human bones. *European City of Science.*
- [M.1] 2022. Skeletten: Wat Kunnen we van ze Leren?. **Television news piece on: Atlas**, *Science behind the news, news from science. Dutch National Television – NPO2. Aired on 23 February, 2022.*
- [T.2] 2022. For Richer or Poorer: Did Wealth Influence Human Health in the Past? *BABAO Student Talks Series.*
- [T.1] 2021. Coughs and the city. Does living in the city affect our respiratory health? *Pint of Science, Netherlands.*
- [K.1] 2021. **Skype a Scientist** *Series of short online lectures on human anatomy and osteoarchaeology for children in elementary schools.*
- [A.1] 2021. **De neus in: archeoloog doet onderzoek naar ademhaling gezondheid in het verleden**. *Interview on Archeologie Magazine.*

PROFESSIONAL AFFILIATIONS

- **Paleopathology Association (PPA)**
- **British Association for Biological Anthropology and Osteoarchaeology (BABAO)**
- **Nederlandse Vereniging voor Fysische Antropologie (NVFA)**
- **International Council of Museums (ICOM)**