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Archéozoologie, Archéobotanique :
Sociétés, Pratiques et Environnements
Département Homme et Environnement
Muséum national d'Histoire naturelle
UMR 7209 CNRS, Paris, France

Research interests

- Evolution of the skull in primates and other mammals
- Characterization and quantification of shape
- Morphological integration and modularity

Current position

Since 2018

Postdoctoral Fellow

Archéozoologie, Archéobotanique : Sociétés, pratiques et environnements (AASPE)
UMR 7209 CNRS-Muséum National d'Histoire Naturelle, Paris, France
Supervisor: Dr Thomas Cucchi

Associate Member

Paléontologie Evolution Paléoécosystèmes Paléoprimatologie (PALEVOPRIM)
UMR 7262 CNRS-Université de Poitiers, Poitiers, France

Previous positions

2016-2017

Postdoctoral Fellow

Function, Evolution and Anatomy Research lab (FEAR)
University of New England, Armidale, Australia
Supervisor: Prof Stephen Wroe

2013-2015

Teaching and Research Assistant (ATER)

Paléontologie, Evolution, Paléoécosystèmes, Paléoprimatologie (PALEVOPRIM)
UMR 7262 CNRS-Université de Poitiers, Poitiers, France

Education

2010-2013

Doctorate in Paleontology with highest honours
PALEVOPRIM UMR 7262 CNRS-Université de Poitiers
Covariations of craniofacial structures in hominids
Supervisors: Dr Franck Guy and Dr Stéphane Ducrocq

2008-2010

Master in Paleontology with honours, Université de Montpellier

2005-2008

Bachelor in Geology, Université de Poitiers

Tools and methods

- 3D geometric morphometrics
- Multivariate statistics and data analysis
- Digital imaging (Avizo, Meshlab, Geomagic, ImageJ)
- Microtomography (scanner, reconstruction)

Scientific publications

Neaux D, Sansalone G, Lecompte F, Noûs C, Haruda A, Schaftberg R, Cucchi T (in press) Examining the effect of feralisation on craniomandibular morphology in pigs, *Sus scrofa* (Artiodactyla: Suidae). *Biological Journal of the Linnean Society*. doi: 10.1093/biolinnean/blaa156

- Harbers H, Neaux D, Ortiz K, Blanc B, Schafberg R, Haruda A, Casabianca F, Studeur J, Renaud R, Cornette R, Locatelli Y, Vigne J-D, Herrel A, Cucchi T (2020) The mark of captivity: plastic responses in the ankle bone of a wild ungulate (*Sus scrofa*). *Royal Society Open Science*. 7: 192039.
- Neaux D, Wroe S, Ledogar JA, Heins Ledogar S, Sansalone G (2019) Morphological integration affects the evolution of midline cranial base, lateral basicranium and face across primates. *American Journal of Physical Anthropology*. 170: 37-47
- Neaux D, Sansalone G, Ledogar JA, Heins Ledogar S, Luk THY, Wroe S (2018) Basicranium and face: Assessing the impact of morphological integration on primate evolution. *Journal of Human Evolution*. 118: 43-55
- Ledogar JA, Luk TH, Perry JMG, Neaux D, Wroe S (2018) Biting mechanics in a specialized clade of primate seed predators. *Plos One*. 13(1): e0190689
- Neaux D, Bienvenu T, Guy F, Sansalone G, Ledogar J, Rae TC, Wroe S, Brunet M (2017) Relationship between foramen magnum position and locomotion in extant and extinct hominids. *Journal of Human Evolution*. 113:1-9
- Neaux D (2017) Morphological integration of the cranium in *Homo*, *Pan* and *Hylobates* and the evolution of hominoid facial structures. *American Journal of Physical Anthropology*. 162(4): 568-579
- Neaux D, Gilissen E, Coudyzer W, Guy F (2015) Integration between the face and the mandible of *Pongo* and the evolution of the craniofacial morphology of orangutans. *American Journal of Physical Anthropology*. 158 (3): 475-486
- Neaux D, Gilissen E, Coudyzer W, Guy F (2015) Implications of the relationship between basicranial flexion and facial orientation for the evolution of hominid craniofacial structures. *International Journal of Primatology*. 36 (6): 1120-1131
- Neaux D, Guy F, Gilissen E, Coudyzer W, Vignaud P, Ducrocq S (2013) Facial orientation and facial shape in extant great apes: a geometric morphometric analysis of covariation. *Plos One*. 8(2): e57026
- Neaux D, Guy F, Gilissen E, Coudyzer W, Ducrocq S (2013) Covariation between midline cranial base, lateral basicranium and face in modern humans and chimpanzees: a 3D geometric morphometric analysis. *The Anatomical Record*. 296 (4): 568-579
- Neaux D, Guy F, Gilissen E, Coudyzer W, Vignaud P and Ducrocq S (2013) Craniofacial covariation in extant great apes: a geometric morphometric study. In: Lestrel PE, editor. *Biological Shape Analysis, Proceedings of the 2nd International Symposium*. New Jersey: World Scientific. p 193-206. ISBN: 9814518409

Selected oral communications

- Neaux D, Herrel A, Cornette R, Debat V, Cucchi T (2019) Changes in functional demand associated with captivity affects wild boar skull shape. *8th meeting of the International Council for Archaeozoology (ICAZ) Archaeozoology, Genetics, Proteomics and Morphometrics Working Group* (Paris, France)
- Neaux D, Herrel A, Cornette R, Debat V, Cucchi T (2019) Impact of captivity on skull shape in wild boar (*Sus scrofa*). *Transforming Pigs Workshop: Integrated Approaches to Measuring Selective Pressures* (Halle, Allemagne)
- Neaux D, Herrel A, Cornette R, Debat V, Cucchi T (2019) Captivity and cranial development in wild boar : exploration of new markers of the process of domestication. *National Symposium Geometric Morphometrics* (Vienne, Autriche)
- Neaux D, Sansalone G, Ledogar JA, Wroe S (2018) Basicranium and face: Assessing the impact of morphological integration on primate evolution. *Journées de la Société d'Anthropologie de Paris* (Poitiers, France)
- Neaux D (2016) Morphological integration and evolution of craniofacial structures in hominoids. *9^{ème} Symposium de Morphométrie et Evolution des Formes* (Paris, France)

Neaux D (2016) Morphological integration in the craniofacial structures. *Réunions scientifiques du thème « de la diversité biologique à la bioarchéologie » du laboratoire PACEA UMR 5199 de l'Université de Bordeaux* (Bordeaux, France)

Neaux D (2015) Intérêt de l'étude de l'intégration des structures crâniofaciales chez les hominidés. *Séminaires de l'Institut de Systématique, Evolution, Biodiversité (ISYEB) UMR 7205 du Muséum national d'Histoire naturelle* (Paris, France)

Neaux D (2015) Morphological integration of the face in humans and chimpanzees and the evolution of early hominin craniofacial structures. *Séminaire du Département de Paléobiologie du Museo Nacional de Ciencias Naturales* (Madrid, Espagne)

Professional services

- Postdoctoral representative at the AASPE laboratory council (since 2018)
- Member of the Biology Archeology Datation CNRS group (GDR 3644)
- Member of the Phenotypic Plasticity CNRS group (GDR 3715)
- Member of the organization committee of the International Council for Archaeozoology (ICAZ) Archaeozoology, Genetics, Proteomics and Morphometrics (AGPM) meeting in Paris (2019)

Peer review: American Journal of Physical Anthropology (x3), Plos One (x2), Journal of Anatomy (x2), The Anatomical Record (x2), Biological Journal of the Linnean Society (x2), Journal of Comparative Human Biology (x2), Journal of Human Evolution, Biology Open, Biodiversitas, Bulletins et Mémoires de la Société d'Anthropologie de Paris, European Journal of Human Genetics, Journal of Applied Oral Science

Grant review: Leakey Foundation (x4)

Teaching experience

2019-2020 Conception and lecture of an "Introductory course to geometric morphometrics" of two days for the BIOARCHEODAT Research Group (GDR 3644)

Lectures, tutorials and practical works to undergraduates and graduates

2013-2015 192 hours per year (ATER)

2011-2013 64 hours per year (during my PhD)

Subjects:

- Paleontology (paleoanthropology, primatology, evolution of vertebrates and invertebrates)
- Statistics (descriptive statistics, multivariate analysis, analysis of regression/correlation)
- Geology (sedimentology, petrology, tectonics, cartography)

Supervision of three Master students:

- Evolution of the cranial base flexion in hominids
- Characterization and quantification of airohynchy in pongids
- Link between blood flow and brain size in hominids

Languages

- French: native speaker
- English: fluent (TOEFL iBT: 107/120, TOEIC: 965/990)