

# JAVIER ORTEGA-HERNÁNDEZ

## CONTACT DETAILS

**Address:** Department of Zoology,  
University of Cambridge, CB2 3EJ, UK  
**Email:** jo314@cam.ac.uk

## PERSONAL DETAILS

**Date of birth:** 5<sup>th</sup> September 1983  
**Nationality:** Mexican [valid Tier 2 (General) Visa]  
**Expertise:** Origin and early evolution of animals

## PROFESSIONAL APPOINTMENTS

- 2019 Assistant Professor of Organismic and Evolutionary Biology  
Department of Organismic and Evolutionary Biology, Harvard University, USA
- 2019 Curator of Invertebrate Paleontology  
Museum of Comparative Zoology, Harvard University, USA
- 2016-18 Herchel-Smith Postdoctoral Research Fellow in Biological Sciences  
Department of Zoology, University of Cambridge, UK  
Bye Fellow, Emmanuel College
- 2013-16 Research Fellow, Emmanuel College  
Department of Earth Sciences, University of Cambridge, UK

## ACADEMIC BACKGROUND

- 2013 PhD in Earth Sciences  
Department of Earth Sciences, University of Cambridge, UK
- 2009 MSc in Palaeobiology (Distinction)  
School of Earth Sciences, University of Bristol, UK
- 2007 Licenciatura en Biología (Undergraduate degree in Biology)  
Facultad de Ciencias, Universidad Nacional Autónoma de México, México

## RESEARCH GRANTS AND AWARDS

- 2018 Investigador Nacional Nivel I – Sistema Nacional de Investigadores, CONACYT.
- 2017 Chinese Palaeontological Society recognition to Yang et al. 2016, *PNAS* 113: 2988-2993, as one of top ten palaeontological studies published in 2016.
- 2016 Most cited publication in *Acta Palaeontologica Polonica* for 2014, awarded for paper “*Burgess Shale-type microfossils from the middle Cambrian Kaili Formation, Guizhou Province, China*”.
- 2015 Paleonturología 2015, awarded by Fundación Conjunto Paleontológico de Teruel-Dinópolis (Spain), for best palaeontological study published in 2014. €4,500.00.
- 2015 Palaeontological Association Research Grant. Awarded by the Palaeontological Association (UK) for field-based research project “*The origins of aerial breathing in terrestrial ecosystems: insights from virtual fossil reconstruction*”. PI. £6,149.00.
- 2015 Herchel Smith Postdoctoral Research Fellowship in Biological Sciences, University of Cambridge, UK. £139,054.00.
- 2014 National Geographic Exploration Grant. Awarded by the National Geographic Society for field-based research project “*The Weeks Formation Lagerstätte (Utah, USA): deciphering animal life during the late Cambrian*”. Co-I. \$16,085.00.
- 2014 Highly commended poster presentation. Awarded to an early career researcher at the 58<sup>th</sup> Annual Meeting of the Palaeontological Association, University of Leeds, UK.
- 2014 IPA and IPC grant. Awarded by the International Palaeontological Association to support attendance to the Fourth International Palaeontological Congress, Argentina.

- 2014 Ernst Mayr Travel Grant in Animal Systematics. Awarded by the Museum of Comparative Zoology, Harvard University (USA) for collections-based research project “*The middle Cambrian lobopodian Aysheaia pedunculata revisited: significance for panarthropod evolution*”. \$2,080.00.
- 2014 Systematics Research Fund. Awarded by the Systematics Association and the Linnaean Society (UK) for collections-based research project “*The middle Cambrian lobopodian Aysheaia pedunculata revisited: significance for panarthropod evolution*”. £1,090.45.
- 2013 Emmanuel College Stipendiary Research Fellowship, University of Cambridge, UK. £66,699.00.
- 2013 Schuchert and Dunbar Grant. Awarded by the Yale Peabody Museum of Natural History (USA) for collections-based research project “*Arthropod palaeobiology from the Ordovician Fezouata Lagerstätte*”. \$1,000.00.
- 2012 Academic excellence award. Granted by the Secretaría de Educación Pública, México. £2,420.00.
- 2011 Callomon Award. Granted by the Palaeontological Association (UK) for field-based research project “*A new locality with Burgess Shale–type fossil preservation from British Columbia*”. £1,464.00.
- 2010 Highly commended oral presentation. Awarded at the postgraduate student conference Progressive Palaeontology 2010, University of Bristol, UK.
- 2009 CONACYT scholarship. Awarded by Mexican government to pursue PhD in Earth Sciences at the University of Cambridge, UK. £65,700.00.
- 2009 Cambridge Trusts & Darwin College bursary to pursue PhD in Earth Sciences. £30,000.00.
- 2008 CONACYT scholarship. Awarded by Mexican government to pursue MSc in Palaeobiology at the University of Bristol, UK. £19,800.00.

#### PEER REVIEWED PUBLICATIONS

GOOGLE H-INDEX: 14 (584 citations)

34. Fu, D., **ORTEGA–HERNÁNDEZ, J.**, Daley, A.C., Zhang, X., and Shu, D. 2018. Anamorphic development and extended parental care in 520 million-year-old stem-group euarthropod from China. *BMC Evolutionary Biology* 18: 147 (doi: 10.1186/s12862-018-1262-6).
- 33.- **ORTEGA–HERNÁNDEZ, J.**, Yang, J. and Zhang, X.-G. 2018. Fuxianhuiids. *Current Biology* 28 (13): R724-R725 (doi: 10.1016/j.cub.2018.04.042).
- 32.- Du, K., **ORTEGA–HERNÁNDEZ, J.**, Yang, J., Zhang, X.G. 2018. A soft-bodied euarthropod from the Cambrian Xiaoshiba Lagerstätte of China supports a new clade of basal artiopodans with dorsal ecdysial sutures. *Cladistics* early view online (doi: 10.1111/cla.12344).
- 31.- Lerosey-Aubril, R., Gaines, R., Hegna, T. A., **ORTEGA–HERNÁNDEZ, J.**, Van Roy, P., Kier, C., and Bonino, E. 2018. The Weeks Formation Konservat-Lagerstätte and the evolutionary transition of Cambrian marine life. *Journal of the Geological Society* 175: 705-715 (doi: 10.1144/jgs2018-042).
- 30.- Zhu, X.-J., Lerosey-Aubril, R. **ORTEGA–HERNÁNDEZ, J.** 2018. Occurrence of the aglaspidid arthropod *Beckwithia* in the Furongian Guole Konservat Lagerstätte. *Palaeoworld* early view online (doi: 10.1016/j.palwor.2018.04.002).
- 29.- **ORTEGA–HERNÁNDEZ, J.**, Fu, D., Zhang, X.-L. and Shu, D. 2018. Gut glands illuminate trunk segmentation in Cambrian fuxianhuiids. *Current Biology* 28 (4): R146-R147 (doi: 10.1016/j.cub.2018.01.040).
- 28.- Pates, S., Daley, A. C., and **ORTEGA–HERNÁNDEZ, J.** 2018. Reply to Comment on “*Aysheaia prolata* from the Wheeler Formation (Cambrian, Drumian) is a frontal appendage of the radiodontan *Stanleycaris*” with the formal description of *Stanleycaris*. *Acta Palaeontologica Polonica* 63 (1): 105-110 (doi: 10.4202/app.00443.2017).



- 12.- **ORTEGA–HERNÁNDEZ, J.**, Esteve, J., and Butterfield, N.J. 2013. Humble origins for a successful strategy: complete enrolment in early Cambrian olenellid trilobites. *Biology Letters* 9 (5): 20130679. (doi: 10.1098/rsbl.2013.0679).
- 11.- Yang, J., **ORTEGA–HERNÁNDEZ, J.**, Butterfield, N.J., and Zhang, X.-G. 2013. Specialized appendages in fuxianhuidids and the head organization of early euarthropods. *Nature* 494 (7438): 468-471. (doi: 10.1038/nature11874).
- 10.- **ORTEGA–HERNÁNDEZ, J.**, Legg, D.A., and Braddy, S.J. 2013. The phylogeny of aglaspidid arthropods and the internal relationships within Artiopoda. *Cladistics* 29 (1): 15-45. (doi: 10.1111/j.1096-0031.2012.00413.x).
- 9.- Lerosey-Aubril, R., **ORTEGA–HERNÁNDEZ, J.**, Kier, C., and Bonino, E. 2013. Occurrence of the Ordovician-type aglaspidid *Tremaglaspis* in the Cambrian Weeks Formation (Utah, USA). *Geological Magazine* 150 (5): 945-951. (doi:10.1017/S001675681300037X).
- 8.- Lerosey-Aubril, R., **ORTEGA–HERNÁNDEZ, J.**, and Zhu, X.-J. 2013. The first aglaspidid *sensu stricto* from the Cambrian of China (Sandu Shale, Guangxi). *Geological Magazine* 150 (3): 565-571. (doi: 10.1017/S0016756812001045).
- 7.- Rak, Š., **ORTEGA–HERNÁNDEZ, J.**, and Legg, D.A. 2013. A revision of the late Ordovician marrellomorph arthropod *Furca bohémica* from Czech Republic. *Acta Palaeontologica Polonica* 58 (3): 615-628. (doi:10.4202/app.2011.0038).
- 6.- Löser, H., García-Barrera, P., Mendoza-Rosales, C.C., and **ORTEGA–HERNÁNDEZ, J.** 2013. Corals from the early Cretaceous (Barremian – early Albian) of Puebla, Mexico: Introduction and Family Stylinidae. *Revista Mexicana de Ciencias Geológicas* 30 (2): 385-403.
- 5.- **ORTEGA–HERNÁNDEZ, J.** and Brena, C. 2012. Ancestral patterning of tergite formation in a centipede suggests derived mode of trunk segmentation in trilobites. *PLoS ONE* 7 (12): e52623. (doi: 10.1371/journal.pone.0052623).
- 4.- Harvey, T.H.P., **ORTEGA–HERNÁNDEZ, J.**, Lin, J.-P., Zhao, Y.-L., and Butterfield, N.J. 2012. Burgess Shale-type microfossils from the middle Cambrian Kaili Formation, Guizhou Province, China. *Acta Palaeontologica Polonica* 57 (2): 423-436. (doi: 10.4202/app.2011.0028).
- 3.- Legg, D.A., Ma, X.-Y., Wolfe, J., **ORTEGA–HERNÁNDEZ, J.**, Edgecombe, G.D., and Sutton, M.D. 2011. Lobopodian phylogeny reanalyzed. *Nature* 476 (7359): E1 (11 August 2011). (doi: 10.1038/nature10267).
- 2.- **ORTEGA–HERNÁNDEZ, J.**, Braddy, S.J., Jago, J.B., and Baillie, P.W. 2010. A new aglaspidid arthropod from the upper Cambrian of Tasmania. *Palaeontology* 53 (5): 1065-1076. (doi: 10.1111/j.1475-4983.2010.00974.x).
- 1.- **ORTEGA–HERNÁNDEZ, J.**, Braddy, S.J., and Rak, Š. 2010. Trilobite and xiphosuran affinities for the putative aglaspidid arthropods *Caryon* and *Drabovaspis* from the upper Ordovician of the Czech Republic. *Lethaia* 43 (3): 427-431. (doi: 10.1111/j.1502-3931.2010.00216.x).

## CONFERENCE CONTRIBUTIONS

### 40 conference abstracts since 2008

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|------|---|
| 2018 | International Conference on Ediacaran and Cambrian Sciences, Xi'an, China.                        |
| 2018 | 14 <sup>th</sup> International Symposium on Tardigrada, Copenhagen, Denmark.                      |
| 2018 | IPC5, Fifth International Palaeontological Congress Paris, France.                                |
| 2017 | 61 <sup>th</sup> Annual Meeting of the Palaeontological Association, Imperial College London, UK. |
| 2017 | 6 <sup>th</sup> International Conference on Trilobites and their Relatives, Tallinn, Estonia.     |
| 2017 | XV Congreso Nacional de Paleontología, SOMEXPAL, San Luis Potosí, Mexico.                         |
| 2016 | Neptune Evo Devo Symposium, University of Lisbon, Portugal. <i>Oral presentation.</i>             |
| 2016 | Euro Evo Devo 2016, Uppsala University, Sweden.   |

- 2016 Palaeo Down Under 2, Adelaide University, Australia.
- 2015 59<sup>th</sup> Annual Meeting of the Palaeontological Association, Cardiff University, UK.
- 2015 Rise of Animal Life (RALI) 2015, The International Conference, University Cadi Ay Yad, Morocco.
- 2014 58<sup>th</sup> Annual Meeting of the Palaeontological Association, University of Leeds, UK.
- 2014 IPC4, Fourth International Palaeontological Congress Mendoza, Argentina.
- 2013 57<sup>th</sup> Annual Meeting of the Palaeontological Association, University of Zurich.
- 2013 GSA Annual Meeting in Denver: 125<sup>th</sup> Anniversary of GSA.
- 2012 56<sup>th</sup> Annual Meeting of the Palaeontological Association, University College Dublin, Dublin, Ireland.
- 2012 Trilo 2012, the 5<sup>th</sup> conference on trilobites and their relatives. Charles University. Prague, Czech Republic.
- 2012 Guizhou 2012. The 17<sup>th</sup> Field Conference of the Cambrian Stage Subdivision Working Group, International Subcommission on Cambrian Stratigraphy & Celebration of the 30th Anniversary of the Discovery of the Kaili Biota. University of Guizhou. People's Republic of China.
- 2011 55<sup>th</sup> Annual Meeting of the Palaeontological Association, University of Plymouth. Plymouth, UK.
- 2011 Progressive Palaeontology 2011, University of Leicester. Leicester, UK.
- 2010 54<sup>th</sup> Annual Meeting of the Palaeontological Association, University of Ghent. Ghent, Belgium.
- 2010 IPC3, Third International Palaeontological Congress, Imperial College. London, UK.
- 2010 Progressive Palaeontology 2010, University of Bristol. Bristol, UK. Oral presentation.
- 2009 Walcott 2009, An International Conference on the Cambrian Explosion. Banff, Canada.
- 2009 Progressive Palaeontology 2009, University of Birmingham. Birmingham, UK.
- 2008 Jangellonian University, 2<sup>nd</sup> International Congress on Ichnology, University of Krakow. Krakow, Poland.
- 2008 Universidad Autónoma de Nuevo León, II Simposio Geocientífico Internacional. Linares, México.
- 2008 8<sup>th</sup> International Congress on Rudists, Dokuz Eylul University. Izmir, Turkey.

### Invited talks

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- 2018 The Emergence of Complex Animal Life, University of Oxford, UK.
- 2018 International Conference on Ediacaran and Cambrian Sciences, Northwest University, China. Keynote speaker.
- 2018 Department seminar, Department of Zoology, University of Cambridge, UK.
- 2018 Department seminar, School of Biological Sciences, University of Adelaide, Australia
- 2018 Institute of Earth Sciences, University of Lausanne, Switzerland.
- 2017 Department of Geology, Ghent University, Belgium.
- 2017 International Workshop on Evolution of Cambrian Arthropods – Taxonomy, Ontogeny and Phylogeny, Northwest University of China, Xian, China.
- 2017 Society for Integrative and Comparative Biology Annual Meeting 2017, New Orleans, USA.
- 2016 150<sup>th</sup> Anniversary of the Department of Zoology, University of Cambridge, UK.
- 2016 Fellow's talk, Emmanuel College, University of Cambridge, UK.
- 2016 Isotope coffee. Department of Earth Sciences, University of Cambridge, UK.
- 2016 Cambridgeshire Geological Club, Cambridge, UK.
- 2016 Associate Professor candidate talk, Department of Earth Sciences, University of Oxford, UK.
- 2016 Departments of Earth and Planetary Sciences / Organismic and Evolutionary Biology Faculty Candidate Talk, Harvard University, USA.

- 2016 Palaeobiology Discussion Group, School of Earth Sciences, University of Bristol, UK.
- 2016 Special seminars in Palaeobiology, Department of Earth Sciences, University of Cambridge, UK.
- 2015 Oxford Geology Group seminar on trilobites, BP Technology Centre, Whitchurch on Thames, UK.
- 2014 Symposium. Fossil arthropods as living organisms. IPC4, Fourth International Palaeontological Congress, Argentina.
- 2012 Laboratory seminar. Key Laboratory for Palaeobiology, Yunnan University, China.
- 2012 Department seminar, Natural History Museum, London, UK.
- 2011 Laboratory seminar. Laboratory for Development and Evolution, Department of Zoology, University of Cambridge, UK.
- 2010 Department seminar. Department of Earth Sciences, University of Cambridge, UK.
- 2010 Chelicerate Workshop, IPC3, Third International Palaeontological Congress, Imperial College London, UK.

## ACADEMIC MENTORSHIP

### Graduate students at Harvard University

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| 2018 | Sarah R. Losso    | Department of Organismic and Evolutionary Biology |
| 2018 | Richard J. Knecht | Department of Organismic and Evolutionary Biology |

### Graduate advisor at University of Cambridge

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| 2018 | Abigail Parker   | Department of Zoology, University of Cambridge |
| 2018 | Lucy Roberts     | Department of Zoology, University of Cambridge |
| 2018 | Alexandra Howard | Department of Zoology, University of Cambridge |

## ACADEMIC AND ADMINISTRATIVE SERVICE

- 2019 Organizer of themed symposium at the “11<sup>th</sup> North American Paleontological Convention”, University of California Riverside, USA.
- 2018 Invited commissioning editor of palaeontological contributions for Geological Magazine 155<sup>th</sup> Anniversary Special Issue.
- 2017 Member of scientific committee at the 6<sup>th</sup> International Conference on Trilobites and their Relatives held in Tallinn, Estonia.
- 2017 Research grant referee for the Palaeontological Association (UK).
- 2016 Chair of contributed session Palaeobiology and deep time, at Euro Evo Devo Uppsala 2016.
- 2014 Co-chair of the open session Lower Palaeozoic faunas, at the Fourth International Palaeontological Congress Mendoza, Argentina.
- 2012 Chairman of the conference Progressive Palaeontology Cambridge 2012, UK.
- 2011 Freelance graphic designer for the Sedgwick Museum of Earth Sciences, University of Cambridge (UK).

### Peer review duty – 49 manuscripts reviewed since 2011

*Acta Paleontologica Polonica; Arthropod Structure and Development; Biological Reviews; BMC Evolutionary Biology; Bulletin of Geosciences; Current Biology; EvoDevo; Geological Magazine; Gondwana Research; Integrative and Comparative Biology; Invertebrate Biology; Journal of Paleontology; Journal of Systematic Palaeontology; Palaeontology; Papers in Palaeontology; Proceedings of the Royal Society B; Nature Communications; Nature Ecology and Evolution; Naturwissenschaften; Philosophical Transactions B; Scientific Reports; Royal Society Open Science.*

## COMPLEMENTARY TRAINING

2018 European Molecular Biology Organization Laboratory Management Course.  
2011 Department of Zoology, University of Cambridge, UK  
Visiting researcher (six months) at the Laboratory for Development and Evolution.

## OUTREACH PUBLICATIONS

- 11.- **ORTEGA–HERNÁNDEZ, J.** 2018. La Explosión del Cámbrico y el origen de la biosfera moderna. *La Jornada de Oriente* 77: 8.
- 10.- **ORTEGA–HERNÁNDEZ, J.** 2017. What is the point of phylogenies? *In* 52 Things you should know about palaeontology.
- 9.- **ORTEGA–HERNÁNDEZ, J.** and Smith, M. R. 2016. The enigmatic lobopodian *Hallucigenia* and the origin of velvet worms. *Fundamental* 29: 1-46.
- 8.- **ORTEGA–HERNÁNDEZ, J.** 2012. Review: Penney D. and Selden P. A. (2011) Fossils spiders: The evolutionary history of a mega-diverse order. Siri Scientific Press. 128 pp. *Palaeontological Association Newsletter* 81: 80-82.
- 7.- **ORTEGA–HERNÁNDEZ, J.** and Crumpton, N. 2012. Progressive Palaeontology Cambridge 2012: meeting summary. *Palaeontological Association Newsletter* 81: 48-50.
- 6.- **ORTEGA–HERNÁNDEZ, J.** 2012. Patterns in Palaeontology: Parsimony and palaeobiology. *Palaeontology [online]* 2 (4): 1-10. Available online at [www.palaeontologyonline.com](http://www.palaeontologyonline.com)
- 5.- **ORTEGA–HERNÁNDEZ, J.** 2011. Fossils Explained: Rudists. *Geology Today* 27 (2): 74-77 (doi: 10.1111/j.1365-2451.2011.00790.x).
- 4.- **ORTEGA–HERNÁNDEZ, J.,** Legg, D. A., Tremewan, J. S. and Braddy, S. J. 2010. Fossils Explained: Euthycarcinoids. *Geology Today* 26 (5): 195-198 (doi: 10.1111/j.1365-2451.2010.00770.x).
- 3.- **ORTEGA–HERNÁNDEZ, J.** 2009. Urban fossil hunting. *Rockwatch Magazine* 52: 8-9.
- 2.- **ORTEGA–HERNÁNDEZ, J.** 2009. Misplaced trace fossils in unlikely environments. *Geology Today* 25 (2): 71-74 (doi: 1111/j.1365-2451.2009.00710.x).
- 1.- **ORTEGA–HERNÁNDEZ, J.** 2008. Fossil discovered in Robledos gets mythical moniker. *Las Cruces Bulletin* 12/05/2008, page A8.