

JAVIER ORTEGA-HERNÁNDEZ

CONTACT DETAILS

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PERSONAL DETAILS

Date of birth: 5th 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, AWARDS AND DISTINCTIONS

- 2019-21 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 58th 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 (614 citations)

- 36.- Zhai, D., **ORTEGA–HERNÁNDEZ, J.**, Wolfe, J. M., Hou, X.G., Cao, C.J., and Liu, Y. Three-dimensionally preserved appendages in an early Cambrian stem-group pancrustacean. *Current Biology* early view online. (doi: 10.1016/j.cub.2018.11.060).
- 35.- Janssen, R., and Budd, G.E. 2018. The last common ancestor of Ecdysozoa had an adult terminal mouth. *Arthropod Structure and Development* early view online. (doi: 10.1016/j.asd.2018.11.003)
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. Fuxianhuids. *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).

- 15.- **ORTEGA–HERNÁNDEZ, J.** 2015. Homology of head sclerites in Burgess Shale euarthropods. *Current Biology* 25 (12): 1625-1631. (doi: 10.1016/j.cub.2015.04.034).
- 14.- **ORTEGA–HERNÁNDEZ, J.,** Lerosey-Aubril, R., Kier, C. and Bonino, E. 2015. A rare non-trilobite artiopodan from the Guzhangian (Cambrian Series 3) Weeks Formation Konservat-Lagerstätte in Utah, USA. *Palaeontology* 58 (2): 265-276. (doi: 10.1111/pala.12136).
- 13.- Smith, M.R. and **ORTEGA–HERNÁNDEZ, J.** 2014. *Hallucigenia*'s onychophoran-like claws and the case for Tactopoda. *Nature* 514 (7522): 363-366. (doi: 10.1038/nature13576).
- 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 fuxianhuiids 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

- 2018 International Conference on Ediacaran and Cambrian Sciences, Xi'an, China.
- 2018 14th International Symposium on Tardigrada, Copenhagen, Denmark.
- 2018 IPC5, Fifth International Palaeontological Congress Paris, France.
- 2017 61th Annual Meeting of the Palaeontological Association, Imperial College London, UK.
- 2017 6th 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. *Oral presentation.*
- 2016 Euro Evo Devo 2016, Uppsala University, Sweden.
- 2016 Palaeo Down Under 2, Adelaide University, Australia.
- 2015 59th 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 58th Annual Meeting of the Palaeontological Association, University of Leeds, UK.
- 2014 IPC4, Fourth International Palaeontological Congress Mendoza, Argentina.
- 2013 57th Annual Meeting of the Palaeontological Association, University of Zurich.
- 2013 GSA Annual Meeting in Denver: 125th Anniversary of GSA.
- 2012 56th Annual Meeting of the Palaeontological Association, University College Dublin, Dublin, Ireland.
- 2012 Trilo 2012, the 5th conference on trilobites and their relatives. Charles University. Prague, Czech Republic.
- 2012 Guizhou 2012. The 17th 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 55th Annual Meeting of the Palaeontological Association, University of Plymouth. Plymouth, UK.
- 2011 Progressive Palaeontology 2011, University of Leicester. Leicester, UK.
- 2010 54th 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, 2nd International Congress on Ichnology, University of Krakow. Krakow, Poland.
- 2008 Universidad Autónoma de Nuevo León, II Simposio Geocientífico Internacional. Linares, México.
- 2008 8th International Congress on Rudists, Dokuz Eylul University. Izmir, Turkey.

Invited talks

- 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 150th 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

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

Preliminary qualifying exam (PQE) committee at Harvard University

2018	Brianne Weir	Haig Lab	Organismic and Evolutionary Biology
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Graduate advisor at the University of Cambridge

2018	Abigail Parker	Head Group	Department of Zoology
2018	Lucy Roberts	Head Group	Department of Zoology
2018	Alexandra Howard	Head Group	Department of Zoology

ACADEMIC AND ADMINISTRATIVE SERVICE

- 2019 Organizer of themed symposium at the “11th North American Paleontological Convention”, University of California Riverside, USA.
- 2018 Invited commissioning editor of palaeontological contributions for Geological Magazine 155th Anniversary Special Issue.
- 2017 Member of scientific committee at the 6th 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 – 52 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; Journal of the Geological Society; Palaeontology; Papers in Palaeontology; Plos One; Proceedings of the Royal Society B; Nature Communications; Nature Ecology and Evolution; Naturwissenschaften; Philosophical Transactions B; Scientific Reports; Royal Society Open Science; Zoological Letters.

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
- 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.