



**Dr Jakob Vinther**  
**BSC(Copenhagen), MSC(Copenhagen), PHD(Copenhagen)**

Senior Lecturer

**Area of research**

Senior lecturer in Macroevolution

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**Summary**

My research spans the study of evolution from the perspective of the fossil record and other disciplines such as molecular biology.

I focus on invertebrate groups such as annelids and molluscs and test our ideas of their evolution and their fossil record with molecular biological techniques to obtain independent estimates of phylogeny and divergence timing.

I also have a particular interest in fossilization processes: Taphonomy. Currently I am working on the preservation of melanin in fossils and how we can use this evidence to reconstruct color patterns in feathered dinosaurs.

**Biography**

2012- Lecturer in Macroevolution, Joint position in Biology and Earth Sciences, U. of Bristol

2011-2012 Independent Post Doctoral fellow, Jackson School of Geosciences, UT Austin

2006-2011 PhD in Palaeontology and Molecular Phylogenetics, Yale University. Thesis Title:

"The role of fossils and phylogeny in understanding the early evolution of annelids and mollusks (lophotrochozoans)"

2004-2006 MSc in Palaeontology and Zoology, University of Copenhagen

2000-2004 BSc in Geology University of Copenhagen

**Teaching**

Key Concepts for Biologists

Diversity of Life (Arthropods and molluscs)

**Keywords**

- Palaeobiology
- Taphonomy
- Molecular Clocks
- Macroevolution

- Evolution
- Melanosomes
- Melanin
- Tree of Life
- Invertebrates
- Cambrian Explosion

## Memberships

## Organisations

[School of Biological Sciences](#)

[School of Earth Sciences](#)

## Other sites

- [Biology](#)

## Earth Sciences staff

- [Earth Sciences academic staff including research fellows](#)

## Research groups

- [Palaeobiology](#)

## Research themes

- [Evolution of Biodiversity and Morphology](#)

## Recent publications

- Saitta, E, Liang, R, Lau, M, Brown, C, Longrich, N, Kaye, T, Novak, B, Salzberg, S, Norell, M, Abbott, G, Dickson, M, Vinther, J, Bull, I, Brooker, R, Martin, P, Donohoe, P, Knowles, T, Penkman, K & Onstott, T, 2019, '[Cretaceous dinosaur bone contains recent organic material and provides an environment conducive to microbial communities](#)'. *eLife*.
- Saitta, ET, Kaye, TG & Vinther, J, 2019, '[Sediment-encased maturation: a novel method for simulating diagenesis in organic fossil preservation](#)'. *Palaeontology*, vol 62., pp. 135-150
- Vinther, J & Parry, L, 2019, '[Bilateral Jaw Elements in \*Amiskwia sagittiformis\* Bridge the Morphological Gap between Gnathiferans and Chaetognaths](#)'. *Current Biology*, vol 29., pp. 881-888.e1
- Zhao, Y, Vinther, J, Parry, L, Wei, F, Green, E, Pisani, D, Hou, X, Edgecombe, GD & Cong, P, 2019, '[Cambrian Sessile, Suspension Feeding Stem-Group Ctenophores and Evolution of the Comb Jelly Body Plan](#)'. *Current Biology*, vol 29., pp. 1112-1125.e2
- Lozano-Fernandez, J, Giacomelli, M, Fleming, J, Chen, A, Vinther, J, Thomsen, PF, Glenner, H, Palero, F, Legg, D, Iliffe, T, Pisani, D & Olesen, J, 2019, '[Pancrustacean evolution illuminated by taxon-rich genomic-scale data sets with an expanded remipede sampling](#)'. *Genome Biology and Evolution*.
- Lozano-Fernandez, J, Tanner, A, Giacomelli, M, Carton, R, Vinther, J, Edgecombe, GD & Pisani, D, 2019, '[Increasing species sampling in genomic-scale datasets provides molecular support for the monophyly of Acari and Arachnida](#)'. *Nature Communications*.
- Nordén, K, Faber, J, Babarovi, F, Stubbs, T, Selly, T, Schiffbauer, J, Štefani, PP, Mayr, G, Smithwick, F & Vinther, J, 2019, '[Melanosome diversity and convergence in the evolution of iridescent avian feathers— implications for paleocolor reconstruction](#)'. *Evolution*, vol 73., pp. 15-27
- Parry, LA, Smithwick, F, Nordén, KK, Saitta, ET, Lozano-Fernandez, J, Tanner, AR, Caron, JB, Edgecombe, GD, Briggs, DE & Vinther, J, 2018, '[Soft-Bodied Fossils Are Not Simply Rotten Carcasses – Toward a Holistic Understanding of Exceptional Fossil Preservation: Exceptional Fossil Preservation Is Complex and Involves the Interplay of Numerous Biological and Geological Processes](#)'. *BioEssays*, vol 40.
- Saitta, ET, Fletcher, I, Martin, PG, Pittman, M, Kaye, TG, True, LD, Norell, MA, Abbott, GD, Summons, RE, Penkman, K & Vinther, J, 2018, '[Preservation of feather fibers from the Late Cretaceous dinosaur \*Shuvuuia deserti\* raises concern about immunohistochemical analyses on fossils](#)'. *Organic Geochemistry*, vol 125., pp. 142-151
- Park, TYS, Kihm, JH, Woo, J, Park, C, Lee, WY, Smith, MP, Harper, DA, Young, F, Nielsen, AT & Vinther, J, 2018, '[Brain and eyes of \*Kerygmachela\* reveal protocerebral ancestry of the panarthropod head](#)'. *Nature Communications*, vol 9.

[View complete publications list](#) in the University of Bristol publications system

## Courses

Dr Vinther currently teaches 4 courses: