

Community: Journal table of contents highlights

**\*\*published between 1st and last day of \*\*DECEMBER\*\* (in print \*and\* early access). \*\*Finish it by January 9th\*\*.** Please add everything as nested bullet-points.

CTRL-K for links

CTRL-SHIFT-V paste w/o format

Look at the table of content duties [here](#) (github)

- [Am Nat](#)
- [Bioinformatics](#)
- [Cell](#)
- [Current Biology](#)
  - [Three-Dimensionally Preserved Appendages in an Early Cambrian Stem-Group Pancrustacean](#). Nice pics of a Cambrian crustacean inside. DOI:10.1016/j.cub.2018.11.060
- [eLife](#)
  - [Gene flow mediates the role of sex chromosome meiotic drive during complex speciation](#)
  - [Meta-Research: Why we need to report more than 'Data were Analyzed by t-tests or ANOVA'](#)
  - [Time-resolved mapping of genetic interactions to model rewiring of signaling pathways](#)
  - [Predicting mutational routes to new adaptive phenotypes](#)
  - [Immune genes are hotspots of shared positive selection across birds and mammals](#)
  - [Meiotic drive of female-inherited supernumerary chromosomes in a pathogenic fungus](#). The authors generate lines of fungi with unpaired chromosomes to explore their patterns of transmission. They show that when male inherited, unpaired chromosomes segregates in a Mendelian fashion, but when inherited through females, the unpaired chromosomes increase its frequency (i.e. drive-like). DOI:https:10.7554/eLife.40251
- [Evolution](#)
  - [Demographic noise and cost of greenbeard can facilitate greenbeard cooperation](#)
  - [Masculinization of gene expression is associated with male quality in \*Drosophila melanogaster\*](#)
  - [Adaptation, chance, and history in experimental evolution reversals to unicellularity](#)
- [GBE](#)
  - [Doublesex Evolution Is Correlated with Social Complexity in Ants](#)
  - [Rapid Expansion of a Highly Germline-Expressed Mariner Element Acquired by Horizontal Transfer in the Fire Ant Genome](#)
- [Genome Biol](#)
  - [GC-biased gene conversion conceals the prediction of the nearly neutral theory in avian genomes](#)
  - [Keen on the tenure track job. are you? Know these things. you should](#)
  - [A new look at an old question: when did the second whole genome duplication occur in vertebrate evolution?](#)
  - [Ten things you should know about transposable elements](#) Bourque et al <https://doi.org/10.1186/s13059-018-1577-z> Review. TEs have different forms, are not randomly distributed, are source of mutations, of genome arrangements, need to balance expression and repression, affects germline and soma, they move but also damage in other

ways, create genes (e.g. Rag1 linked to vertebrate immunity) and RNAs, modifies regulatory networks, requires specialized tools (experimental design important).

- [KrakenUnig: confident and fast metagenomics classification using unique k-mer counts](#)

- **[Genome Res](#)**

- [Evolutionary conservation of Y Chromosome ampliconic gene families despite extensive structural variation](#) Brashear et al doi: 10.1101/gr.237586.118. The authors compare the amplicons of cat testes genes to understand the evolution of the Y chromosome and hybrid male sterility across the Felidae family. They show that Y-chromosome ampliconic regions are varied and that variation was conserved throughout speciation, with a stable gene content.
- [Selfish mutations dysregulating RAS-MAPK signaling are pervasive in aged human testes](#)
- [Long-read sequencing technology indicates genome-wide effects of non-B DNA on polymerization speed and error rate](#)

- **[Insectes Sociaux](#)**

- [Making the right choice: how \*Crematogaster scutellaris\* queens choose to co-found in relation to nest availability](#)
- [The influence of sociality, caste, and size on behavior in a facultatively eusocial bee](#)
- [Are societies resilient? Challenges faced by social insects in a changing world](#)

- **[Journal of Evolutionary Biology](#)**

- [Cytonuclear incongruences hamper species delimitation in the socially polymorphic desert ants of the \*Cataglyphis albicans\* group in Israel](#)
- [Repeated switches from cooperative to selfish worker oviposition during stingless bee evolution](#)
- [A costly chemical trait: phenotypic condition dependence of cuticular hydrocarbons in a dung beetle](#)

- **[MBE](#)**

- [Understanding the Factors That Shape Patterns of Nucleotide Diversity in the House Mouse Genome](#) Booker & Keightley <https://doi.org/10.1093/molbev/msy188> The authors attempt to uncover the causes of nucleotide diversity trough around functional genes: it is difficult to distinguish background selection and selective sweeps. They analysed high-coverage whole genome data of 10 wild individuals and simulations of the distribution of fitness effects around specific sites. They find that strong advantageous mutations cannot be entirely explained between background selection and selective sweeps.
- [Adaptive Evolution of Animal Proteins over Development: Support for the Darwin Selection Opportunity Hypothesis of Evo-Devo](#)
- [Pleiotropy modulates the efficacy of selection in \*Drosophila melanogaster\*](#)

- **[Mol Ecol](#)**

- [Gene expression is more strongly associated with behavioural specialisation than with age or fertility in ant workers](#)
- [Inbreeding tolerance as a pre-adapted trait for invasion success in the invasive ant \*Brachyponera chinensis\*](#)
- [Sexual dimorphism and heightened conditional expression in a sexually selected weapon in the Asian rhinoceros beetle](#)

- **[Myrmecological News](#)**

- **[Nature](#)**

- **[Nature Comms](#)**

- [Field-level clothianidin exposure affects bumblebees but generally not their pathogens](#)
- [Genome-wide study of hair colour in UK Biobank explains most of the SNP heritability](#)

- **[Nature Genetics](#)**

- [Reference genome sequences of two cultivated allotetraploid cottons, \*Gossypium hirsutum\* and \*Gossypium barbadense\*](#)

- [An evolutionary framework for measuring epigenomic information and estimating cell-type-specific fitness consequences](#)
- [Single-cell and single-molecule epigenomics to uncover genome regulation at unprecedented resolution](#)
- **[Nature Methods](#)**
- **[Plos Biol](#)**
  - [Sex-specific dominance reversal of genetic variation for fitness](#). The authors find empirical evidence for sex-specific dominance reversal in a beetle. This process allows sexually antagonistic alleles to become dominant only in the sex where they are beneficial, thus becoming invisible to selection when in the “wrong” sex. This process would maintain high genetic diversity for those alleles affected. DOI:10.1371/journal.pbio.2006810
  - [Single-cell copy number variant detection reveals the dynamics and diversity of adaptation](#). The authors describe a new method to detect CNVs in real time at a single cell level. In this study they show the parallel recurrent evolution of a particular CNV under directional selection in *S.cerevisiae*. DOI:10.1371/journal.pbio.3000069
- **[Plos Comp Biol](#)**
- **[Plos Genet](#)**
  - [On the unfounded enthusiasm for soft selective sweeps II: Examining recent evidence from humans, flies, and viruses](#)
  - [Population structure in genetic studies: Confounding factors and mixed models](#)
  - [Walking along chromosomes with super-resolution imaging, contact maps, and integrative modeling](#)
  - [Evolution of maternal and zygotic mRNA complements in the early \*Drosophila\* embryo](#)
  - [Boundaries mediate long-distance interactions between enhancers and promoters in the \*Drosophila bithorax\* complex](#)
  - [Modulation of \*Drosophila\* post-feeding physiology and behavior by the neuropeptide leucokinin](#)
  - [Evolution at two time frames: Polymorphisms from an ancient singular divergence event fuel contemporary parallel evolution](#)
- **[PNAS](#)**
  - [Loss of protein synthesis quality control in host-restricted organisms](#)
  - [Benefits of phenotypic plasticity for population growth in varying environments](#)
  - [Microbiome interactions shape host fitness](#)
  - [Fipronil pesticide as a suspect in historical mass mortalities of honey bees](#)
- **[Proc B](#)**
  - [Impact of immune activation on stored sperm viability in ant queens](#). The authors show that immune activation can affect sperm viability in *Lasius niger* queens. This effect is, however dependent on the life stage of the queen, where sperm viability in newly mated queens is less affected than in already established queens. DOI:10.1098/rspb.2018.2248
  - [Insulin signalling's role in mediating tissue-specific nutritional plasticity and robustness in the horn-polyphenic beetle \*Onthophagus taurus\*](#)
  - [Interactions between the sexual identity of the nervous system and the social environment mediate lifespan in \*Drosophila melanogaster\*](#)
  - [Clonal evolution and genome stability in a 2500-year-old fungal individual](#). The authors investigate the genome of a large (~75 Ha) fungus which is estimated to have been alive for ~2500 years. They find some somatic variation within the large fungus, arising from new mutations, but also an overall surprising genetic uniformity, indicating that the genome has mechanisms to control genome change over large periods of time. DOI:10.1098/rspb.2018.2233

- **Science**
  - [A hidden cradle of plant evolution in Permian tropical lowlands](#)
- **TREE**
  - [An Inconvenient Truth: The Unconsidered Benefits of Convenience Polyandry](#)
  - [Evolution In The Light Of Fitness Landscape Theory](#)
  - [Testing the Sexual and Social Benefits of Cooperation in Animals](#) Covas & Doutrelant  
DOI:<https://doi.org/10.1016/j.tree.2018.11.006>. The authors highlight issues and outstanding research questions (eg. is cooperation heritable?) in empirical and field-based studies about social and sexual dynamics in cooperating animals.
- **Trends in Genetics**

[1]. **Other papers/tools that you feel someone should have seen:**

- Insect [Differential Gene Expression in Red Imported Fire Ant \(\*Solenopsis invicta\*\) \(Hymenoptera: Formicidae\) Larval and Pupal Stages](#)
- PeerJ [Genetic analysis reveals Finnish \*Formica fennica\* populations do not form a separate genetic entity from \*F. exsecta\*](#)
- BioRxiv
- BMC [Queens stay, workers leave: caste-specific responses to fatal infections in an ant](#) Julia Giehr and Jürgen Heinze
- Journal of Chemical Ecology
- J Exp Zool B Mol Dev Evol
- Nature Ecology and Evolution
  - [The genome of the jellyfish \*Aurelia\* and the evolution of animal complexity](#)
  - [Giant tortoise genomes provide insights into longevity and age-related disease](#)
  - [How the entire scientific community can confront gender bias in the workplace](#)
- Biology Methods and Protocols
  - [RNA profile diversity across arthropoda: guidelines, methodological artifacts, and expected outcomes](#)
- Scientific Reports
- Animal Behaviour
- Genetics
- Heredity
- Aging
- Mol Cell Biol
- J Gerontol
- Methods in Ecology and Evolution
- Current Opinion in Insect Science
- Molecular Phylogenetics & Evolution
- DGE

