Resources for Ecology, Evolution and Phylogenetic Comparative Methods

Welcome to the curated list for Phylogenetic Comparative Methods.

Labs and Research networksResources

- Phylodiversity network
- Evolutionary Community Ecology Group - Université Montpellier II
- Ackerly D.
- Angert A. - at the interface of ecology and evolutionary biology
- Araújo M. - PREDICTING THE EFFECTS OF ENVIRONMENTAL CHANGE ON BIODIVERSITY
- Beaumount L. - Department of Biological Sciences, Macquarie University, Australia, Niche Modeling
- Bokma F. Umea, Sweden
- Bolnick D. - BOLNICK LAB AT THE UNIVERSITY OF TEXAS AT AUSTINEco-Evo-Immuno Dynamics
- Brown J. - Interdisciplinary Biology, Community Ecology, Biogeography, Allometry
- Buckley L. - The University of Washington
- Butler M. University of Hawaii
- Cadotte M. University of Toronto
- Cahill J. - University of Alberta
- Cao Kunfang - Guangxi University
- Cavender-Bares J. University of Minnesota
- Chase J. M. - Process Governing species assembly over various scales
- Chave J.
- Chen Shengbin - Nanjing Institute of Environmental Sciences, Ministry of Environmental Protection
- Comita L.
- Corlett R. - Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences

- Cornwell W.
- Crisp M.
- Davies J.
- Davies K. F.
- Devictor V.
- Diniz-Filho A. F. - Brazil
- Drummond A.
- Enquist B.
- Felsenstein J. - University of Washington
- Feng Gang - Inner Mongolia University
- Freckleton R. - Plant population ecology, modelling plant populations, modelling weed populations. Evolutionary ecology, phylogenetic comparative methodology and its application to ecological problems.
- Garland T. -UC Riverside
- Gaston K. - Conservation at University of Exeter
- Ge Xuejun South China Botanical Garden
- Gittleman J. - INSTITUTE OF ECOLOGY, ECOLOGY BUILDING, UNIVERSITY OF GEORGIA, ATHENS, GA 30602-2202
- Glor R.
- Graham C. - Stony Brook University
- Green J.
- Guisan A. - Univerisite de Lausanne
- Hardy O.
- Hawkins B. - University of California, Irvine
- He Fangliang Univerisity of Alberta, Canada
- Heard S. - Understanding ecological controls on the evolution of biodiversity
- Heibl C.
- Holyoak M.
- Hu Junhua - Chengdu Institute of Biology, Chinese Academy of Sciences
- Huang Jihong - Chinese Academy of Forestry
- Hunt G.
- Hurbert A.

- Ingram T. -
- Ives A.
- Jetz W. - Yale University, USA
- Kembel S.
- Kerr J. - University of Ottawa
- Kraft N. - UCLA
- Kreft H. - University of Goettingen
- Kress J.
- Lavergne S. - Laboratoire d'Ecologie Alpine (LECA) CNRS - Université Grenoble Alpes (UMR 5553)
- Legendre P.
- Li Rong Kunming Institute of Botany, Chinese Academy of Sciences
- Lin Luxiang Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences
- Liu Xiaojuan Institute of Botany, Chinese Academy of Sciences
- Loreau M.
- Losos J. - Evolution of Lizards, Havard University
- Lovette I.
- Ma Keping -IBCAS
- Maddison W.
- Mao Lingfeng - University of Alberta
- McPeek M. - how communities of organisms are assembled and structured across the landscape
- Meynard C.
- Mi Xiangcheng -IBCAS
- Moles A.
- Mooers A.
- Morlon H.
- Mouquet N.
- Oakley T.
- O'Meara B.
- Pavoine S.

- Pei Nancai - Research Institute of Tropical Forestry, the Chinese Academy of Forestry
- Peres-Neto P. - Community and Quantitative Ecology
- Primack R. - Boston University
- Purvis A. - Natural History Museum, London, UK
- Pyšek P. - Department of invasion ecology Botanický ústav Akademie věd ČR/Institute of Botany, Academy of Sciences of the Czech Republic
- Qian Hong - Illinois State Museum, USA
- Qiao Huijie
- Queenborough S. A.
- Rabosky D. University of Michigan
- Rahbek C. - Univerisity of Copenhagen, Denmark
- Schluter D. - University of British Columbia
- Smith Stephan
- Smith Stacy
- Soininen J. University of Helsinki
- Svenning J. -The Arhus University, Denmark
- Swenson N. University of Maryland
- Sykes M.
- Thuiller W. Lab -Chez-Alice University, France
- Tuomisto H.
- Vamosi S. University of Calgary
- Vellend M.
- Wainwright P.
- Wang Zhiheng - Peking University
- Webb C. University of Alaska
- Weir J. - University of Toronto
- Whittaker R. - School of Geography and the Environment, University of Oxford
- Wiens J. - Evolution of adaptation of world's amphibians
- Willig M. University of Connecticut
- Wright I.

- Yang jie Xishuangbanna Tropical Botanic Garden, Chinese Academy of Sciences
- Zhang Jian - East China Normal University

Journals

- American Journal of Botany
- Annual Review of Ecology and Systematics
- Biodiversity Science
- Botanical Journal of the Linnean Society
- Conservation Biology
- Diversity and Distributions
- Ecography
- Ecological Monographs
- Ecology Letters
- Ecology
- Evolution
- Global Ecology and Biogeography
- Guihaia
- Journal of Biogeography
- Journal of Ecology
- Journal of Systematics and Evolution
- Methods in Ecology and Evolution
- Molecular Ecology
- Nature
- New Phytologist
- Oecologia
- Oikos
- Plant Diversity
- PLoS ONE
- Proc. Nat. Acad. Sci.

- Proc. Royal. Soc. Biolog.
- Science
- Scientific Reports
- Taxon
- The American Naturalist
- Trends in Ecology and Evolution

Software for Phylogenetics Evolution and Conservation

- Joe Felsenstein's comprehensive list for Phylogenetic software
- Tree Thinkers
- Seqtrace Extracting DNA sequences from ab1 files.
- Rentrez R package Downloading Nucleotide Sequences from Genbank
- Geneious An integrated system for phylogenetic analysis
- CLUSTAL Alignment
- MUSCLE
- PartitionFinder
- ModelFinder
- jModelTest
- RAxML Builing phylogenies
- FastTree Approximately-maximum-likelihood phylogenetic trees from alignments of nucleotide or protein sequences for very large dataset.
- MrBayes
- PAUP*
- BEAST, FigTree, PhyloGen and Tracer
- MEGA
- r8s Dating using Penalized likelihood
- PATHd8 Dating
- TreePL Dating for Large Trees
- multidivtime

- TimeTree - The divergence Time between two taxa, widely used in molecular dating.
- Mesquite
- Phylocom
- APE Analysis of Phylogenetics and Evolution
- diversitree
- RASP Reconstruction of Ancestral Area
- Lagrange Reconstruction of Ancestral Area using Maximum Likelihood
- BioGeoBEARS Reconstruction of Ancestral Area
- BAMM Bayesian Analysis of Macroevolutionary Mixtures
- SAM
- Biodiverse Phylogenetic Diversity and Conservation
- EcoSim
- PAST
- Lifemapper
- DIVA-GIS
- MAXENT Species Distribution Modelling using Maxim Entropy
- SSDM R package Species Distribution Modelling
- BIOMOD R package Species Distribution Modelling
- SDMtoolbox A Python Library for Species Distribution Modelling

Resources for statistics in R

- R project
- Quick R
- The R Graphical Manual
- R Examples
- R Resources at NCEAS
- R-phylo Wiki
- Comparative methods in R - Ilhabela
- R Hackathon

- Analysis of Community data using R
- F. Farrell's R resources
- R Programming for APTS Students at Oxford University by R. Ripley
- Statistics with R
- R-Tips
- Create Maps with R geographical Classes
- Applied Spatial Statistics in R
- Spatial Analysis by Robert Hijmans
- r-popgen-hackathon
- Analysis of Discret Data
- Data Mining by Dr, Michael Hahsler

Online Courses for Ecology, Statistical Analysis and Phylogenetic Comparative Methods

- Review Course: Markov Chains and Monte Carlo Methods
- Bayesian Methods
- Machine Learning
- Doing Bayesian Data Analysis
- Doing Bayesian Data Analysis
- Stat 295 Bayesian Inferences
- Bayesian Analysis for the Social Sciences
- Integrative Biology at UC Berkeley, Principles of Phylogenetics: Ecology and Evolution
- Principles of Phylogenetics: Systematics
- EEB courses on Ecology
- Phylogenetics (EEB)
- Principles and Methods in Systematic Biology
- Quantitative methods in Ecology and Evolution by Schluter (UBC)
- Principles and Practice of Phylogenetic Systematics
- Phylogenetic Comparative Methods

- Biodiversity analysis by He Fangliang
- Statistical Methods in Ecology
- Statistics for Ecology and Evolution 2008 By Jack Weiss
- An Introduction to R: Software for statistical modelling and Computing, Course Notes
- Biostatistics-Statistical Computing by Gonçalo
- Basic Population Genetics (and a plenty of resources)
- Biology Textbook
- Coalescent Theory and Applications

Data Sources

- gbif
- Genbank
- The Plantlist
- Tropicos
- DRYAD
- CTFS
- CFBIO
- Gentry's Transect Dataset
- TimeTree - The divergence Time between two taxa
- TRY - A global database of plant traits
- CHELSA, Climatologies at high resolution for the earth's land surface areas
- WorldClim
- Global Soil at 1km resolution

Contact

Please contact Jinlong Zhang if you find any mistake.