Resource Summary Report

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Tree of Life: Phylogeny of Spiders

RRID:SCR_003801
Type: Tool

Proper Citation

Tree of Life: Phylogeny of Spiders (RRID:SCR_003801)

Resource Information

URL: http://research.amnh.org/atol/files/

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Description: Project whose aim is to produce a robust phylogeny of all the deepest branches within a mega-diverse group, the spiders, by combining a massive amount of newly generated comparative genomic data with a substantial set of new and re-assessed data on morphology and behavior. They propose to collect a huge amount of genomic information in order to test and improve the results achieved by over 50 detailed morphological cladistic analyses conducted by more than 30 investigators during the past 15 years. The insignificant amount of genomic work to date on spiders has been uncoordinated and of little utility for broad-scale phylogenetic investigation. The advent of high-throughput DNA sequencing, however, makes it feasible to examine substantial parts of the genome across a dense sampling of spider taxa. They propose to sequence at least 50 loci (genome samples of 500-1,000 or more base pairs that can be sequenced as single pieces in both directions simultaneously) for representatives of at least 500 genera of spiders and their closest relatives (the whipscorpion orders Amblypygi, Uropygi, and Schizomida). These genera will be carefully selected by a sampling strategy designed to maximize the resolution of deep branches within spider phylogeny, and will purposefully include all the previously most-favored study organisms of ethologists, ecologists, physiologists, and developmental and molecular biologists, thus integrating and contextualizing their research. Data matrices will be produced that combine the new genomic data with a new, comprehensive survey of morphological and behavioral homologies, offering a unique index to all comparative data on one large group. New computer software, designed in large part by members of their group and using massively parallel processing to achieve supercomputing capability, makes such analyses feasible.

Abbreviations: Phylogeny of Spiders

Synonyms: ATOL: Phylogeny of Spiders, Assembling the Tree of Life: Phylogeny of Spiders

Resource Type: data or information resource, portal

Keywords: morphology, molecule, phylogeny

Funding: NSF DEB 0228699

Resource Name: Tree of Life: Phylogeny of Spiders

Resource ID: SCR_003801

Alternate IDs: nlx_158099

Record Creation Time: 20220129T080221+0000

Record Last Update: 20260829T182834+0000

Ratings and Alerts

No rating or validation information has been found for Tree of Life: Phylogeny of Spiders.

No alerts have been found for Tree of Life: Phylogeny of Spiders.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 1 mentions in open access literature.

Listed below are recent publications. The full list is available at NIF .

Dahdul WM, et al. (2010) The teleost anatomy ontology: anatomical representation for the genomics age. Systematic biology, 59(4), 369.