

Package ‘timetree’

April 28, 2015

Type Package

Title Interface to the TimeTree of Life Webpage

Description A interface to the TimeTree of Life Webpage (www.timetree.org). TimeTree is a public database for information on the evolutionary timescale of life. This package includes functions for searching divergence time for taxa or all nodes of a phylogeny.

URL <http://www.timetree.org>

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Imports XML, phangorn

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timetree-package *Interface to the TimeTree of Life Webpage*

Description

A interface to the TimeTree of Life Webpage (www.timetree.org). TimeTree is a public database for information on the evolutionary timescale of life. This package includes functions for searching divergence time for taxa or all nodes of a phylogeny.

Details

Package: timetree
Type: Package
Version: 1.0
Date: 2015-04-11
License: GPL (>= 2)

Author(s)

Franz-Sebastian Krah <f.krah@mailbox.org>

References

<http://www.timetree.org>

Hedges SB., Dudley J. & Kumar S. (2006) *TimeTree: a public knowledge-base of divergence times among organisms*. *Bioinformatics* 22:2971-2972

Examples

```
# timetree(taxa=c("Boletales", "Agaricales"))  
# timetree(taxa=c("fungi", "plants"))
```

author.search *Lookup publications by author names from TIME TREE*

Description

Lookup publications by author names from TIME TREE

Usage

```
author.search(author)
```

Arguments

author a character specifying the author

Value

an object of class list

publ.nr number of publications found

publ a list of data.frames with publication names, taxa and times

Author(s)

Franz-Sebastian Krah

Examples

```
# author.search(author="Berbee")
```

dikarya	<i>Tree of Dikarya</i>
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Description

Phylogenetic tree of true fungi (Dikarya)

Usage

```
data("dikarya")
```

Details

The topology is based on published articles. See 'References' for the article list.

Value

dikarya object of class phylo

Author(s)

Franz-Sebastian Krah

References

Floudas et al. (2012) *The Paleozoic origin of enzymatic lignin decomposition reconstructed from 31 fungal genomes*. Science 336:1715-1719

Padamsee et al. (2012) *The genome of the xerotolerant mold Wallemia sebi reveals adaptations to osmotic stress and suggests cryptic sexual reproduction*. Fung Genet Biol 49:217-226

Matheny et al. (2006) *Major clades of Agaricales: a multilocus phylogenetic overview*. Mycologia 98:982-995

Examples

```
data(dikarya)
```

```
reference.list
```

Lockup complete reference list from TIME TREE

Description

Lockup divergence time from TIME TREE

Usage

```
reference.list()
```

Details

Downloads the current reference list for the TIMETREE OF LIFE. It serves information on Author, Title, Journal, Year and PubMed ID

Value

an object of class list

a data.frame with reference information

Author(s)

Franz-Sebastian Krahl

Examples

```
# reference.list()
```

```
timetree
```

Lockup divergence time from TIME TREE

Description

Lockup divergence time from TIME TREE

Usage

```
timetree(taxa)
```

Arguments

taxa a character set specifying two taxa

Value

an object of class list

divergence a data.frame of mode list with divergence times for taxa

references a data.frame of mode list with references

Author(s)

Franz-Sebastian Krah

Examples

```
# timetree(taxa=c("Boletales", "Agaricales"))
```

timetree.phylo	<i>Lockup divergence time from TIME TREE for a phylogeny</i>
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Description

Lockup divergence time from TIME TREE for the nodes of a given phylogeny

Usage

```
timetree.phylo(phy, node.time=c("expert", "mean", "median"))
```

Arguments

phy an object of class phylo

node.time a character specifying which time should be used as node.labels

Value

an object of class list

age a data.frame of mode list with divergence times for \$tip.label

phy an object of class "phylo" with new node labels according to node.times

Author(s)

Franz-Sebastian Krah

Examples

```
# data(dikarya)
# a <- timetree.phylo(dikarya, node.time="mean")
# plot(a$phy, show.node.label=TRUE)
```

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