📎 Set up age distributions (attachment)

Version 1.0.0, by Giorgio Bianchini

Description: Computes node age distributions from trees contained in an attachment.

Module type: FurtherTransformation

Module ID: `5d721496-f2fa-48de-ad0d-90ef5d8086aa`

This module is used to set up the age distributions for the nodes, that can then be plotted using the *Plot age distributions* (id `5dbe1f3c-dbea-49b3-8f04-f319aefca534`) Plot Action module.

To use this module, you should add as an attachment a tree file containing e.g. a sample from the posterior distribution of dated trees. This module will use all the trees in the file to compute the age distributions. The tree file can be in NEXUS, Newick, Newick-with-attributes, NCBI ASN.1 or Binary format.

Parameters

Attachment

Control type: Attachment

This parameter specifies the attachment from which the age distributions will be read. This should be a tree file in NEXUS, Newick, Newick-with-attributes, NCBI ASN.1 or Binary format.

Age type

Control type: Drop-down list

Default value: Until tips

Possible values:

- Until tips
- Since root

This parameter determines the kind of age that is computed.

If the value is `Since root`, the age of each node corresponds to the distance d (as in, the sum of branch lengths) from the node to the root of the tree; in this case, the root node

would have an age of `0` .

If the value is `Until tips` , first the total length l of the tree from the root node to the most distant tip is computed; then, the age of each node is $d - l$. In this case, if all the tips of the tree are contemporaneous, they will have an age of `0` .

Compute mean

Control type: Check box

Default value: Checked

If this check box is checked, in addition to the age distribution, the mean age for each node.

Credible interval

Control type: Drop-down list

Default value: Highest-density

Possible values:

- None
- Highest-density
- Equal-tailed

This parameter determines what kind of credible interval for the age is computed. If the value is `None` , no credible interval is computed. If the value is `Highest-density` , the interval that contains the proportion of samples specified by the [Threshold](#) with the highest probability density is computed. If the value is `Equal-tailed` , the interval corresponds to the symmetrical interval around the average that contains the specified proportion of samples.

The functions for computing credible intervals are based on code from the R package `bayestestR` , available under a GPLv3 licence [here](#).

Threshold

Control type: Slider

Default value: 0.89

Range: [0.00, 1.00]

Apply

Control type: Button

This button applies the changes to the other parameter values and signals that the tree needs to be redrawn.