



# Set up age distributions

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*Version 1.0.2, by Giorgio Bianchini*

**Description:** Computes node age distributions.

**Module type:** FurtherTransformation

**Module ID:** a1ccf05a-cf3c-4ca4-83be-af56f501c2a6

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 open 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.

## Parameters

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### 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 ]

## Scaling factor

**Control type:** Number spin box

**Default value:** 1

**Range:** [ 0,  $+\infty$  )

This parameter is used to scale the age distributions (and the tree, if the [Apply scaling to transformed tree](#) check box is checked).

## Apply scaling to transformed tree

**Control type:** Check box

**Default value:** Checked

If this check box is checked, the [scaling factor](#) is applied to the transformed tree, as well as to the age distributions.

## Name

**Control type:** Text box

**Default value:** AgeDistributions

This parameter specifies a name that can be used to identify the age distributions in cases where multiple age distributions have been computed for the same tree.

## Apply

**Control type:** Button

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