

Aa Group labels

Version 1.5.0, by Giorgio Bianchini

Description: Highlights monophyletic groups with a label.

Module type: Plotting

Module ID: 7ef15916-4383-4ee7-b4bd-bd44a7be1849

This module is used to highlight monophyletic groups by adding "bars" with labels next to the tree.

Parameters

Attribute

Control type: Text box

This parameter specifies the attribute used to determine the text of the labels.

Attribute type

Control type: Attribute type

Default value: String

Possible values:

- String
- Number

This parameter specifies the type of the attribute used to determine the text of the labels. By default this is `String`. If the type chosen here does not correspond to the actual type of the attribute (e.g. `Number` is chosen for the `Name` attribute, or `String` is chosen for the `Length` attribute), no label is drawn. If the attribute has values with different types for different nodes, the label is only shown on nodes whose attribute type corresponds to the one chosen here.

Attribute format

Control type: Attribute formatter

This parameter determines how the value of the selected attribute is used to determine the text of the label. By default, if the [Attribute type](#) is `String` the text of the label

corresponds to the value of the attribute, while if the [Attribute type](#) is `Number` the text of the label corresponds to the number rounded to 2 significant digits.

Only on last ancestor

Control type: Check box

Default value: Unchecked

If this check box is checked, the label is only shown for nodes that have a value for the specified [attribute](#) that differs from their ancestor's value. For example, this makes it possible to use the Propagate attribute module to propagate an attribute (e.g. a gene name or a phylum) to the last common ancestor of all taxa that have that attribute (i.e. all orthologs of that gene or all members of that phylum), and then show a group label for that LCA.

Distance

Control type: Number spin box

Default value: 100

Range: ($-\infty$, $+\infty$)

If the tree is drawn using *Rectangular* coordinates, this determines the distance of the line containing labels from the root node. If the tree is drawn using *Circular* coordinates, this determines the radius of the circle containing the labels.

Margin

Control type: Number spin box

Default value: 5

Range: ($-\infty$, $+\infty$)

This parameter determines the margin to use when drawing the label. If this is greater than 0, the label is larger than the leaves that belong to it, while if it is lower than 0, the label is smaller than the leaves that belong to it.

Height

Control type: Number spin box

Default value: 20

Range: $[0, +\infty)$

This parameter determines the height of the label.

Prevent overlap

Control type: Check box

Default value: Checked

If this check box is checked, the module will make sure that no two labels overlap, by shifting some of the labels further away. This happens automatically; if you wish to have more control, disable this option and enable multiple instances of the module using different attributes.

Preserve nesting

Control type: Check box

Default value: Unchecked

If [Prevent overlap](#) is enabled, this parameter determines whether labels for descendant nodes are allowed to float above their ancestors.

Gravity

Control type: Drop-down list

Default value: Bottom

Possible values:

- Bottom
- Top
- None

If [Prevent overlap](#) is enabled, this parameter determines whether the labels are clustered towards the top or the bottom.

Manual label rows

Control type: Check box

Default value: Unchecked

If this option is enabled, label rows can be specified manually using an attribute.

Label rows

Control type: Number spin box (by node)

Default value: 0

Range: $[0, +\infty)$

Default attribute: `LabelRow`

If [Manual label rows](#) is enabled, this parameter can be used to manually specify label rows. Row 1 is closest to the tree and row numbers increase going further away from the tree (unless [Invert arrangement](#) is enabled). Attribute values < 1 are ignored.

Row margin

Control type: Number spin box

Default value: 5

Range: $(-\infty, +\infty)$

If [Prevent overlap](#) is enabled, this parameter determines the margin between consecutive rows of labels.

Invert arrangement

Control type: Check box

Default value: Unchecked

If [Prevent overlap](#) is enabled, this parameter determines whether larger labels are closest or farthest from the tree.

Fill colour

Control type: Colour (by node)


Default value:  #000000 (opacity: 0%)

Default attribute: `LabelFillColour`

This parameter determines the colour of the background of the label.

Stroke colour

Control type: Colour (by node)

Default value:  #000000 (opacity: 100%)

Default attribute: `LabelStrokeColour`

This parameter determines the colour of the outline of the background of the label.

Stroke thickness

Control type: Number spin box (by node)

Default value: 0

Range: $[0, +\infty)$

Default attribute: `LabelThickness`

This parameter determines the thickness of the outline of the background of the label.

Font


Control type: Font

Default value: Helvetica-Bold 10pt

This parameter determines the font used to draw the labels.

Text colour

Control type: Colour (by node)

Default value:  #000000 (opacity: 100%)

Default attribute: `Color`

This parameter determines the colour of the text used to draw the labels.

Text alignment

Control type: Drop-down list

Default value: Center

Possible values:

- Near

- Center
- Far

This parameter determines the alignment of the text within the label.

Text margin

Control type: Number spin box

Default value: 0

Range: ($-\infty$, $+\infty$)

This parameter determines the margin between the edge of the label and the start of the text.

Overflow

Control type: Drop-down list

Default value: Expand label

Possible values:

- Expand label
- Clip
- Compress text

This parameter determines what to do when the the label text is larger than the group that should be highlighted. If this is `Expand label` (the default), the label is enlarged so that all the text can fit in it. If this is `Clip`, the excess text is clipped (hidden). If this is `Compress text`, the text is scaled horizontally so that it fits completely within the label.

Further information

This module cannot detect automatically the best value for the various layout parameters, therefore you will have to tweak these manually. In particular, on very large trees it may seem at first that the module is not doing anything; if this is the case, please try increasing the [Font](#) size or the other parameters.

Multiple instances of this module can be used to obtain various effects; e.g. one instance could be used to draw the labels, while another can be used to draw coloured bars.

If the [Prevent overlap](#) option is enabled, the labels are arranged on multiple rows in order to prevent overlapping. The [Manual label rows](#) option can be used to manually "override" the automatic row assignment.

Here are two examples of this module in action on a tree with *Rectangular* and *Circular* coordinates, respectively:

