

Foliage2D 1.x

Foliage2D is a Unity3D editor extension that you can use to create simple foliage animations as well as regions of foliage along a path.

Foliage Objects

You can create a new foliage object by accessing the menu **GameObject->2D Foliage->Create Foliage Object** (Figure 1).

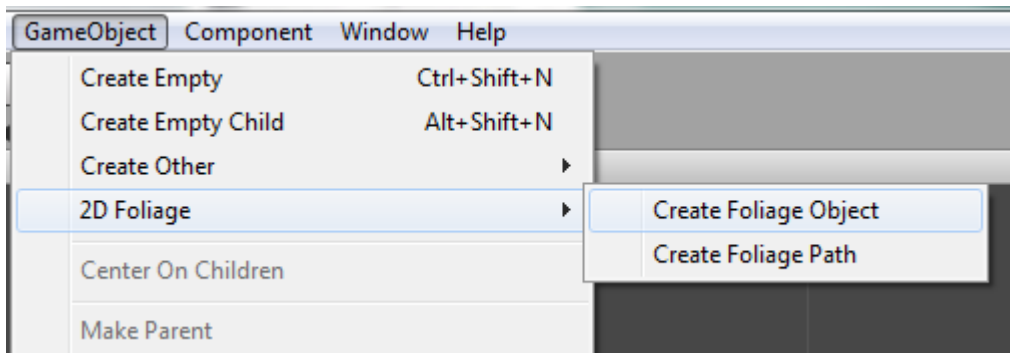


Figure 1 – Foliage2D menu

Foliage object scripts

When a Foliage2D object is created it has two scripts, (*Foliage2D* and *Foliage2D_Animation*).

Foliage2D (script)

This is the script that handles mesh creation and updating, sets the default material. There are a few public variables you can change in the inspector, (Figure 2).

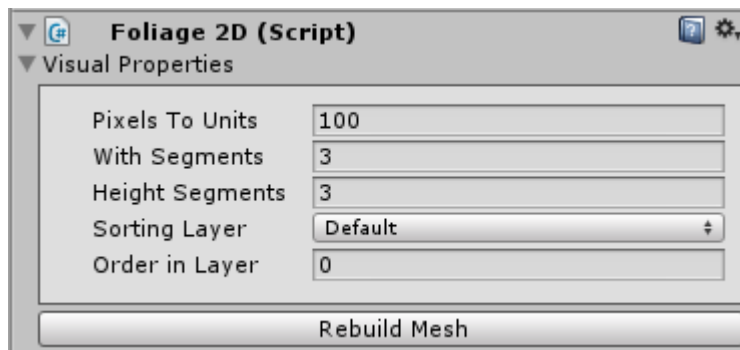


Figure 2 - Foliage2D public variables

VISUAL PROPERTIES:

Pixels To Units – This value allows you to specify how many texture pixels should fit in 1 Unity unit.

Sorting Layer and Order in Layer – These two have the same functions as Unity's Sprite attributes.

With Segments – The number of columns the mesh has.

Height Segments – The number of rows the mesh has.

Rebuild Mesh – This is a button that calls the method that creates and rebuilds the object mesh.

Foliage2D_Animation (script)

This script handles the mesh animation. The public variables in the inspector are arranged in 2 groups: *Animation* and *Offset Factors* (Figure 3).

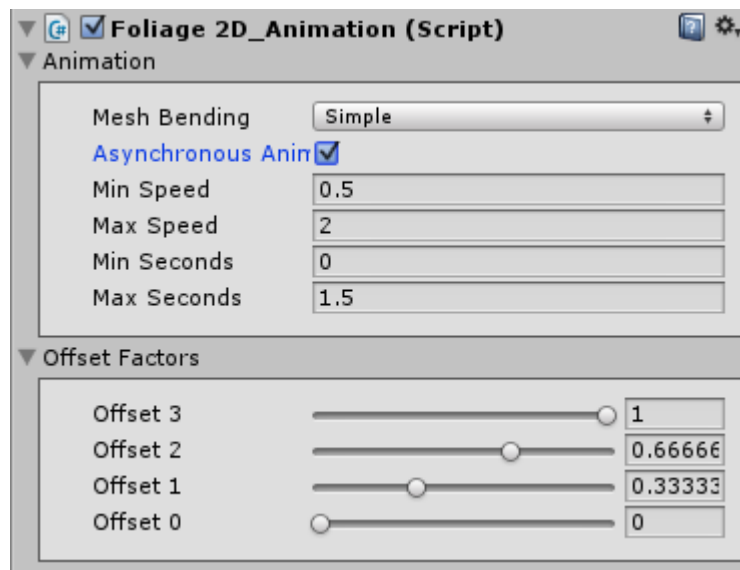


Figure 3 – Foliage2D_Animation public variables

ANIMATION:

Mesh Bending

- **Simple** - Applies a simple bending to the foliage mesh by offsetting the position of the mesh vertices.
- **Smart** - Applies a smart bending to the foliage mesh by rotating the vertices around a point.

Asynchronous Anim Start - When set to true, the speed of the animation is changed for a short period of time. This change takes place only once at the start of the game. This is useful if you don't want the foliage objects to have synchronous animations.

Min and Max Speed - The min and max value for a random number used to change the playback speed of an animation.

Min and Max Seconds - The min and max value for a random number. The value of this number determines how many seconds should the animation speed offset last.

OFFSET FACTORS:

This group contains a series of sliders that control which part of the animated variable “*offset*” will be used to change the position of a particular horizontal row of vertices. The number of sliders corresponds to the number of horizontal rows of vertices.

Path Objects

A path object can be created from the menu **GameObject->2D Foliage->Create Foliage Path** (Figure 1).

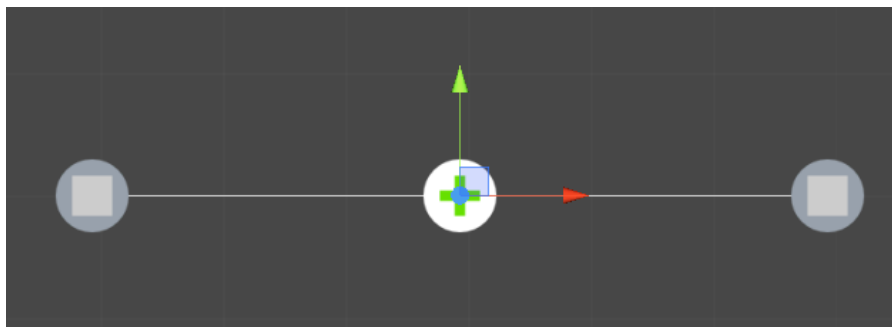


Figure 4 - Foliage path

By default the path is empty. For the objects to be instantiated on this path you must place an object prefab in the **GameObject** field in the path inspector (Figure 5).

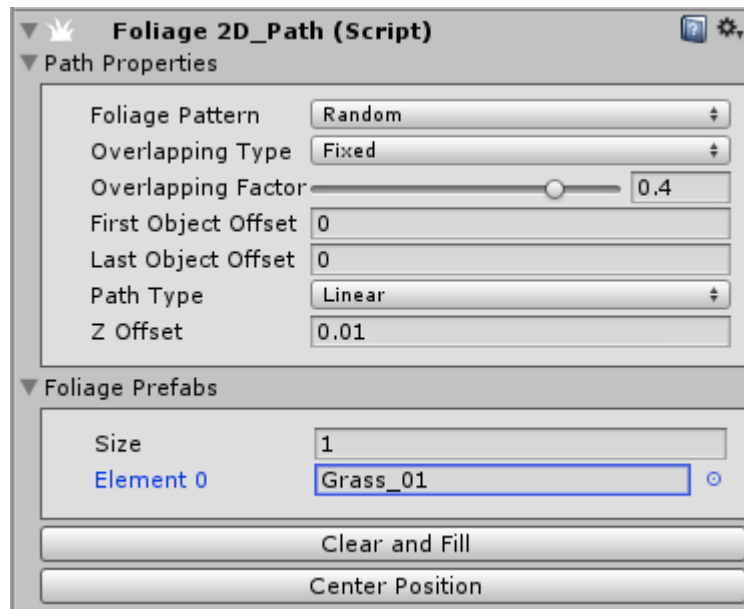


Figure 5 – Foliage2D_Path public fields

Foliage2D_Path (script)

This script is responsible for the placement of the foliage objects along a path and their instantiation.

PATH PROPRIETIES:

Foliage Pattern - Describes how the foliage objects should be arranged on the path lines.

- **Random** – When a new object must be instantiated, a random value between 0 and the max number of foliage prefabs, is generated. This value is used to decide which prefab to instantiate.
- **Consecutive** - The objects are instantiated and arranged in a consecutive order.

Overlapping Type – Controls the objects density on the path.

- **Fixed** – The density is constant.
- **Random** – A random overlapping factor value generated between a min and a max.

Overlapping Factor - The value of the overlapping factor determines which part of a foliage object mesh will be placed to the left of the right edge of the previous foliage object mesh.

Min and Max Overlapping – The min and max for a random overlapping factor value.

First Object Offset - Offsets the distance from the start of the line, where the first object on the current line will be placed.

Last Object Offset - Offsets the distance from the start of the line, where the last object on the current line will be placed.

Path Type - Describes how the objects will be placed on the foliage path.

- **Linear** - The foliage objects are arranged in straight line and bottom aligned to the path lines.
- **Smooth** - The foliage objects are arranged on a smoothed line.

Z Offset - The offset on the Z axis for a foliage object.

FOLIAGE PREFABS:

Size - The size of the list that contains the foliage prefabs.

Clear and Fill – Deletes all the objects on the current path and instantiates new objects.

Center Position - This is a button you can use to reset the Transform Position pivot point of the foliage object to the center of the path.