

# Fishes asset.

## Introduction

This assets provides you to place area with fishes. They have they own behaviour, and it depends on flying time and how close is player to them. You can explore example scene in Assets/Fishes/Scenes/

## Prefabs

There are two prefabs in folder Assets/Butterflies/Prefabs. The first one is Fish that is example of prefabs you can use [Image 1].

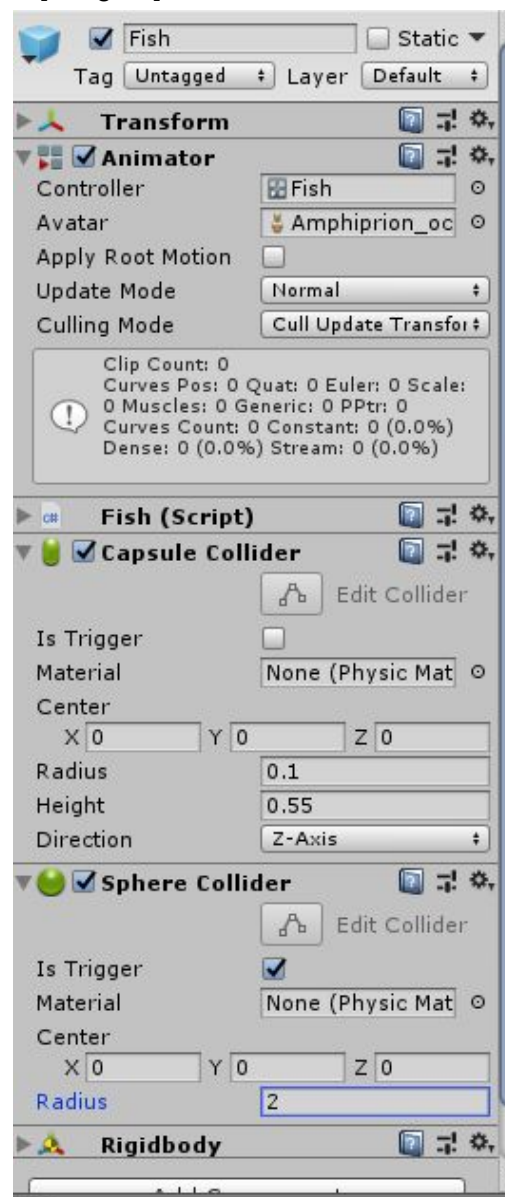


Image 1. Components of Butterfly prefab.

Every fishes must have Animator, with one variable called State, Sphere Collider trigger which detects Players nearby, CapsuleCollider and Rigidbody. And the second is FishArea. You can use it on any scene.

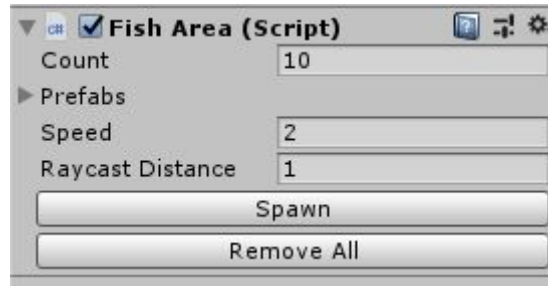


Image 2. FishArea component.

It has component FishArea [Img. 2]. You can pick the number of fishes that you want to place. You can put array of prefabs in it. You can save the speed of fishes. Also you can save raycastDistance which means the distance of fish vision. This variable visualized on scene as black line in front of fish.

This component has 2 buttons. Spawn - spawns GameObjects from random prefab. And all fishes will be placed inside area. RemoveAll - destroys all objects in current area.

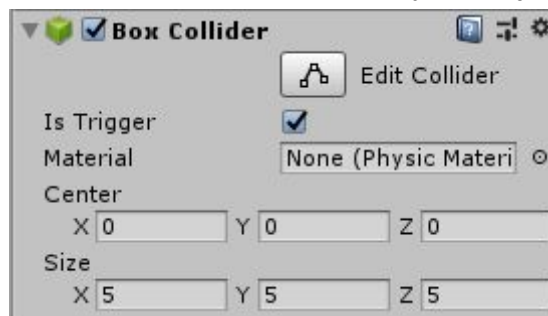


Image 3. Box Collider of FishArea prefab.

Box collider [Img. 3] on this object defines the area where fishes can be spawned. If you don't want to change code in this asset it is enough to use this prefab.

# Scripts

## FishArea.cs

Component controls fishes in current area.

public void InitializeAllFishes() - initializes all instances of Fishes components in child objects.

public void RemoveFishes() - deletes all child GameObjects with Fish component.

public void SpawnFishes() - spawns or destroys fishes until their number equals to count filed.

public void SpawnFish() - spawns GameObject from random prefab.

public void MixPositions() - mixes positions of Fishes.

protected GameObject GetRandomPrefab() - get random prefab from array.

protected Vector3 GetRandomPoint() - get random point inside area. It ignores the obstacles inside area.

## Fish.cs

Component that controls animation and behaviour of fish.

internal void Move() - main behaviour of fish. It can swim inside box, and sometimes stay at one points. If player comes close to it, it will swim away from him.

internal void Initialize(FishArea fishArea) - initialization method.

public void AddPlayer(Transform t) - add Player near the butterfly who needs to be avoided.

public void RemovePlayer(Transform t) - remove Player from avoidance list if he is far enough.

## FishAreaInspector.cs

Custom inspector for FishArea comopnent.