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## About this guide

In this guide, we will go through the various steps behind creating a new monster. I will attempt to be as detailed as I can - but there are aspects to this that are best covered in other guides. In these cases, I will denote that as such.

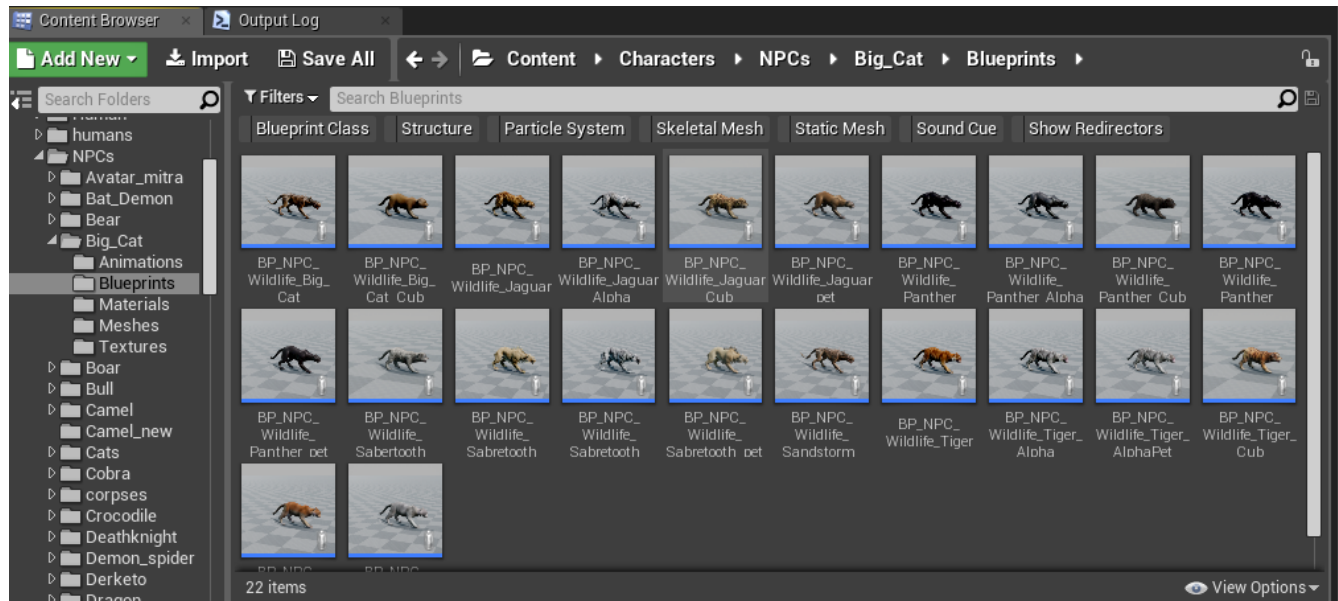
We will not be going over how to create animations or meshes in this guide. This guide assumes that you will be making a new monster based on existing monsters (or have the prerequisite knowledge about how to animate your own monster)

We will be going over a fair amount of tables in this guide - if an entry is not detailed in one of the table entries list below, it is because it is either not used, or the functionality not clear to me. Leave these settings as a default or experiment with them to find out what they are.

## Step 1 - Finding a core blueprint to copy

All creatures in Conan Exiles are based on the `"/Game/Characters/BaseBPWildlife"` master blueprint. The base game animals can be found in the `"/Game/Content/Characters/NPCs/"` folder, so if you wish to make a new type of, say, Jaguar, that is where you will find them.

In this guide, we will be creating a new monster we will call "Black Death" which will be a new type of boss-jaguar, with it's own stats, loot, attacks and - to an extent - visual look.



For our "Black Death" Jaguar, we will be using the Jaguar base monster, which we can find in the `"/Game/Characters/NPCs/Big_Cat/Blueprints/"` folder.

Once we have created a copy of this blueprint, we may want to change some basics about our creature, and we will start with the basic attributes.

## Step 2 - Altering basic attributes

Once we have our copy of the Jaguar, it's time to change some basic stats for it. With basic attributes, I don't mean hitpoints and damage values - that will come later, but seeing as we already have a copy of our blueprint ready, it is prudent to do these changes immediately.

## Creature Visuals

The visuals are simultaneously the easiest and hardest things to change. Let's first go through how to change the size of the creatures, and after that, we will look briefly at textures and skins.

## Changing the size

Changing the size of a creature requires scaling two things - the Capsule Component and the Mesh. For some monsters (most in fact) - it's enough to scale the Capsule component, since the monster mesh is a child of the capsule component. However - some monsters have separate scales for these as they may be very oblong (like crocodiles) or otherwise require specialized collision (dragons, rhinos, etc).

If you are editing a monster that requires you to change both of these values, you should attempt to scale these relative to each other. A monster with scale 2 should therefore double the capsule component and other collisions it may have.

For our "Black Death" Jaguar, we will add a small boost to the scale of the beast - giving it some additional presence. Bosses do tend to be bigger after all. An extra 25% (1.25) seems suitable here.

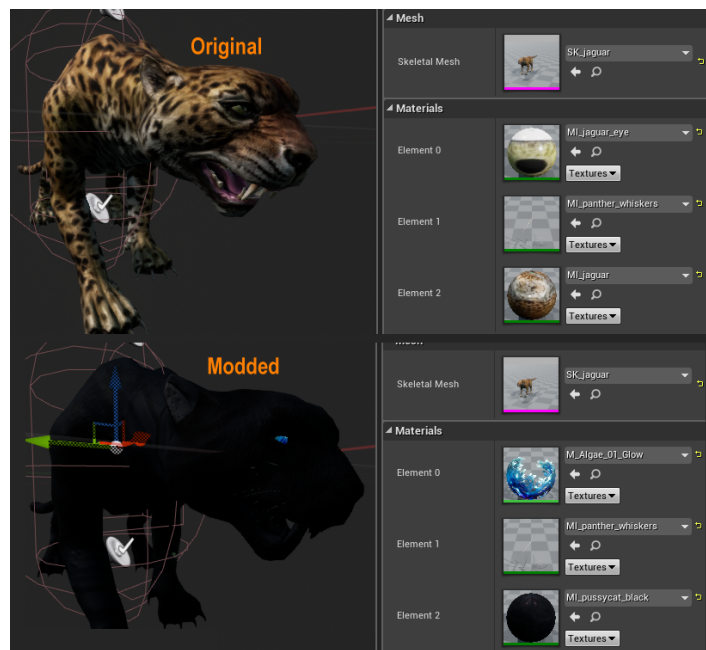
## Changing the textures

As mentioned before - in this guide, we will not go into details about how to create meshes and textures - however - there are visuals that you may be able to change and use pre-existing assets for it.

By opening up the blueprint and selecting the mesh, you will notice a certain amount of textures that are loaded for each creature.

For our Jaguar (image on the right), we can quickly find a (sort of) decent replacement for the skin and eyes more suitable for our soon-to-be deathmachine.

The easiest material to switch out is doubtlessly the eyes. In our example, we have replaced them with the glowing algae texture, although there are better examples of glowing textures in the dev-kit. I suggest finding your own personal favourite.



## Behaviours

There are many ways of altering the behaviour of a creature. Most of these can be found in the component named "TargetDistribution" Component, and so we will go through these in detail below.

### Targeting/

**Attack Players** - Check this if you want your creature to attack players when they spot them

**Allow Call for help** - Check this if you want the creature to call to its community (more about communities later) members for help in combat

**Call for help range** - This is the range in Unreal Units (1000 = 10meters / ~32 feet) for the call for help reaches

**Target Spotted Cry Range** - This is the distance to the player at which the creature performs the call for help.

**Give Up Lost Target** - If you uncheck this, your creature will not give up chase when losing sight of the target

**Forget Lost Target Time** - This is the time in seconds until the creature gives up when losing sight of the target

**Forget Unreachable Time** - This is the time in seconds until the creature gives up when it cannot path to the target

**Respond to Call for help** - You may or may not want your creature to answer calls for help. By default, this is checked, but you may want to have creatures that do not respond to calls for help for some reason. This allows you to have multiple types of creatures in the same community with more intricate social behaviour (an alpha calls for help, but does not respond to it, as an example).

**Refresh Target Selection** - How often the creature should recheck whom it wants to attack. Typically set to 2 seconds but you may want to create a monster that is very 'sticky' and focuses on the first person it turns aggressive against.

**Give up Distance** - This is the distance the player/enemy has to run away for before the creature gives up chase.

**Max Attack Distance** - this should be set to the distance of the maximum range of the creatures maximum-range attack. This can vary greatly between creatures, and if you are not planning on changing the attacks, it's probably best to leave this be.

**Passive Until attacked** - if this is checked, the creature will not attack unless attacked first.

**Use Target prediction** - Primarily used if the creature is using ranged attacks (such as spider spits). If target prediction is not used, the creature will not turn or aim towards where you will run TO - rather it will attack towards where you are when the creature decides to attack.

**Max Projectile Offset** - For ranged attacks, this determines how badly the creature can miss - with a value of 100 it's possible for ranged attacks to miss with as much as 1m

**Min Projectile Offset** - For ranged attacks, this determines the minimum offset - a 0 here is a perfect hit.

**Projectile scale factor** - This increases the projectile scale factor over distance

**Attack Angle** - This determines the maximum angle the creature can fire at a player from. A value of 90 here means that there is a 90 degree angle in front of the player where the creature may fire a projectile.

## **Taunting/**

**Should Threaten** - Taunts really are just a type of attacks that do not cause damage as far as creatures are concerned. If this box is ticked, the creature will make use of this 'attack'.

**Taunt range** - The range at which the creature should play the taunt before going into combat - this should ideally be set higher than the Max Attack Distance

**Attack Range** - While in combat, the creature uses this range to determine if they should perform a taunt or not

**Taunt Cooldown Time** - Taunts have a cooldown timer that prevents creatures from continuously performing taunt 'attacks'. Set this number higher if you want your creature to only rarely taunt while in combat.

**Max Taunt Count** - In addition to a cooldown timer, there is a maximum amount of times a creature will taunt while in combat (in order for it to not look rather silly).

**Threaten Forget Time** - The time it takes the creature to forget that it's already threatened an oncoming threat.

## **Weapons/**

**Pick Random Weapon After Attack** - if you want your creature to select attacks from a list (generally you do), this should be checked

**Pick Best Weapon** - Default on, and it's wise to leave it as such, or your creature may perform completely random and inappropriate attacks

**Pick Best Weapon After Attack** - If this is not checked, the creature will randomize between all available attacks - it's best to just leave this checked

**Weapon Range Swap Min Time** - The minimum time it takes for the creature to decide to use a different attack if the range for a selected attack is no longer valid

**Is Stationary** - Determines if the monster is stationary or not (Note - This may or may not actually be used)

## **Targeting Scoring/**

**Ignore Passive** - If this is checked, the creature will not attack other creatures that are marked as passive

**Current Target Score** - When a creature selects an enemy, this is the score for that enemy that is put into the creatures selection-list.

**Caused Damage Score** - Whenever the creature takes damage, this is the amount of points assigned to that target in the creatures selection-list. You can use this to great effect to make monsters act very stubbornly - or - make them constantly.

## **Community Affiliations/**

As a reference - 10000 is the community for human NPCs in general, so if you want to make "pets" for npc's, have this in mind.

**Retaliate** - This determines if the creature should fight back when attacked or not

**Ignore Community** - Communities put into this array are ignored when it comes to cry-for-help mechanics

**Attack Community** - Any community in this list are available targets for the creature.

**Friendly Community** - Any community in this list will not be attacked by the creature.

**A note about communities: A full list of communities for the game can be found at the end of this document.**

## Target Allocation/

**Melee Slots** - This determines how many other enemies may be in melee combat at the same time with the creature. If more than this number of creatures are in combat with it, they will stand at distance and wait their turn.

## AI/

**Chase range** - For how far the creature will run after an attacker before giving up

**Max Archer range** - The range at which the creature will attempt ranged attacks

## Investigate/

**Investigate Time** - When a creature is called by call-for-help or lures or other reasons, it may be inclined to investigate the disturbance rather than immediately jump into combat. This is the time it takes before a creature stops investigating.

**Purge Investigate Time** - When called by a purge, this is the time the creature attempts to find a valid target to attack before giving up

## Communities

All monsters are set up with a community number. This community determines what group of creatures they belong to. Generally speaking, the same types of creatures have the same type of community (all spiders have the same community, as an example).

Community is a powerful tool, as it allows you to set up different behaviours; one creature-type may for example have Alphas that do not use calls for help, while their younglings call for help immediately.

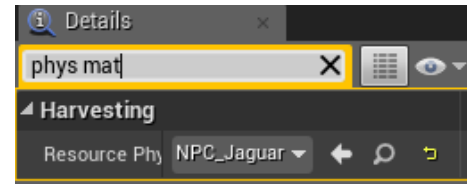


## Step 3 - Setting up a Physical Material

This step is short but incredibly important. Creatures take their hitpoints and harvest-loot table not from stats in the blueprint, but from a reference table called "MonsterDataTable" and "LootTableResource" respectively.

The first thing you should do is to find the "**Physical material**" stat in the creature blueprint. If you have made a copy of an existing creature, there will already be a material assigned here.

Simply make a copy of this material and name it something else, and you will have completed the first step of this process.



In our case, we will want our Black Death Jaguar to have much more health, and perhaps drop an increased number of claws and pelts, and so we will set it up with a new physical material called "**NPC\_Jaguar\_BlackDeath**".

Create new physical materials for the creature by right-clicking in your folder in the content browser and select

**New / Physics / Physical Material**

## Setting up Corpse Harvest Loot

In order to set up the harvestable corpse of our creature, you will need to open the "**LootTable\_Resource**" table. In this table, we will need to create a new entry named the same as your Physical Material set up from before (in our case, "**NPC\_Jaguar\_BlackDeath**")

**isRock** - this should be clicked if the resource is harvested like a rock

**isTree** - likewise, if the resource is a tree, this should be clicked

**shouldDropAll** - Uncertain what this is, we've never used it

**MinHitPoints** - the minimum amount of hits that the resource can take before depleted

**MaxHitPoints** - the maximum amount of hits that the resource can take before depleted

**RespawnTime** - the time it takes for the node to respawn

**MaxPickupDropValue** - leave this as is, it's not used

**NodeTier** - defaults to 0, which allows any tier of any tool to harvest it, we'll get into this later. In the actual game, we don't do anything with this except for star metal.

**DropOneLimitedResource** - If this is checked the system will make certain that at least one limited resource drops, regardless of the dropchance for it

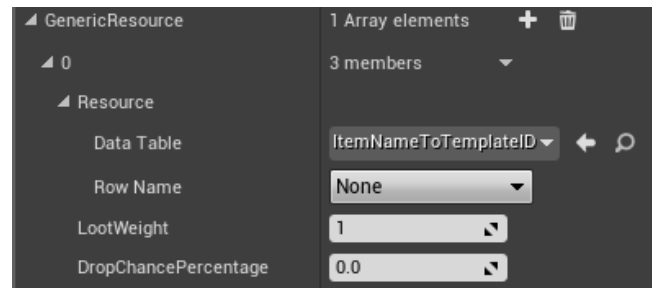


A quick note about **ResourceTemplate**/ - The resource template dropdown is optional and for our purposes we don't need it. It is used to set up global templates for certain monster types so that it is easier to assign loot to new monsters.

We won't need to edit this for our purposes right now but if you are creating a new monster and have a new item that you would like to use the same template as, say, spiders, you can select the spider template from this and your monster will drop all the things defined in that template (in addition to the extra items you assign below).

### **GenericResource/**

This part of the loot-table defines which resources are given out for every chop on the resource. The LootWeight and the DropChancePercentage entries here doesn't matter and you can safely leave it at 1/0.



Note that all the loot-tables go through the

**ItemNameToTemplateID** table, which means that if you have created a new item, you will need to create entries for these in that table and add it through the mod-controller.

### **SpecialResource/**

This part of the loot-table is a standard loot-table. You can enter as many resources here as you like, and assign a DropChancePercentage to them.

### **LimitedResource/**

As with SpecialResource, this allows you to select any amount of resources to drop here, but - they are limited by the MaxDropAmounts value. Typically things like unique items or heads are set to MaxDropAmounts=1 here.

## Setting up the Monster Stat Table entry

As before, the "MonsterStatTable" will require a new entry named after our Physical Material. This table determines a number of important stats for our new creature.

**MonsterHealth** - The amount of hitpoints for the creature

**MonsterArmor** - The amount of armor for the creature

**MonsterXP** - The amount of experience points given when the creature is killed

**KBDefense** - not used

**AILOD1Distance** - Determines the distance in Unreal Units (100 Uu = 1m = 3.2ft) for LOD'ing out/in the AI settings for for LOD 1 for the creature

**AILOD2Distance** - Determines the distance in Unreal Units (100 Uu = 1m = 3.2ft) for LOD'ing out/in the AI settings for for LOD 2 for the creature

**YawRotationRate** - The amount of degrees the creature can turn per seconds while moving and in combat

## Step 4 - Setting up the attacks of a creature

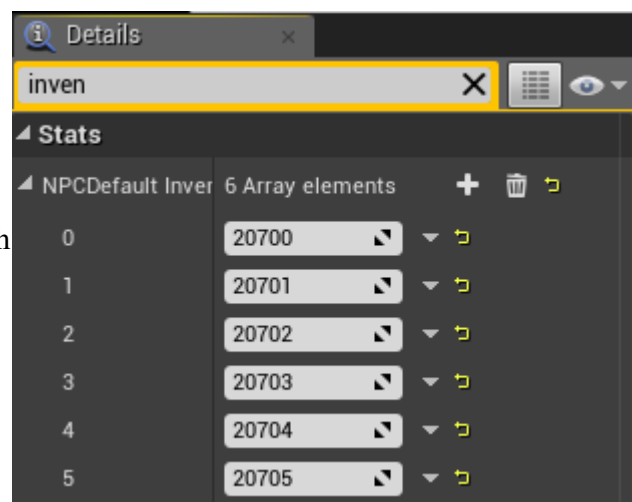
This last step will be the least detailed, because it deals in large parts with the Item-Table. For a detailed overview of the Item-Table, please refer to the "**Primer - ItemTable.pdf**" primer in this .zip file.

Creatures in Conan Exiles may have multiple attacks assigned to them. Each of these attacks need to be an entry in the Item-Table.

If you open the creature blueprint and search for "inven" in the details-tab, you will find a list much like in the image to the right.

These are ItemTemplateIDs that refer to the attacks available in the **ItemTable**.

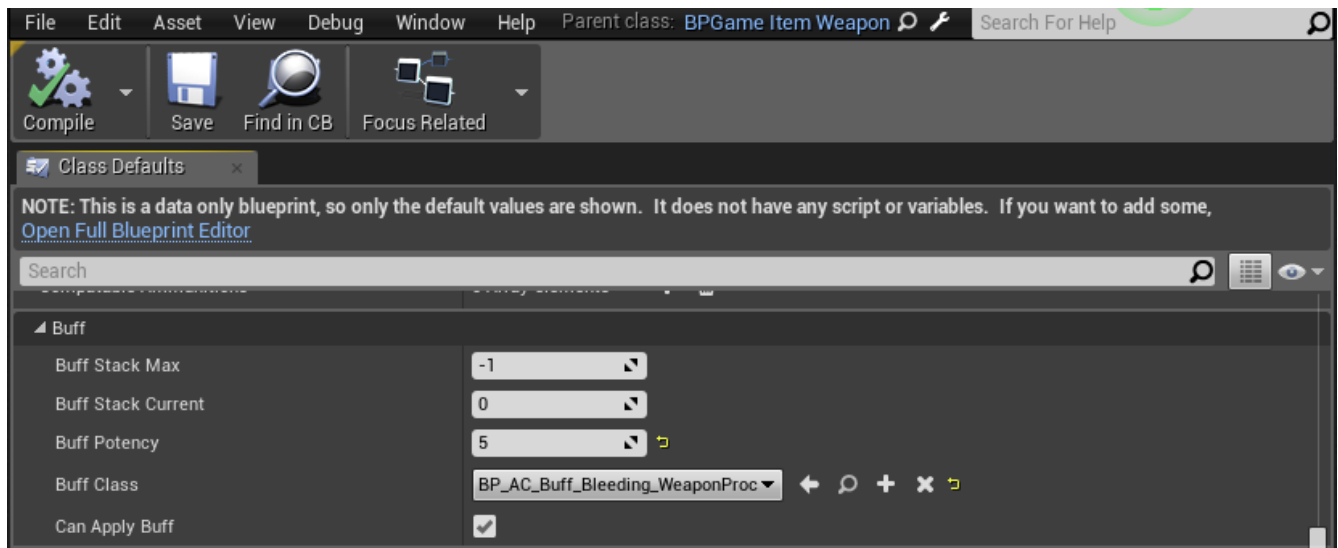
The important information that you will want to set up in the ItemTable are as follows...



## ItemClass

Unless you want special properties like Bleed, Knockback, etc on the attack, this should be **"BPGameItemWeapon"**. If you DO want special effects on the attack, you will need to find the effect that you want in the **"/Game/Items/"** folder (for example **"BPGameItemWeapon\_GenericBleed"**), or make your own.

These blueprints are all children of the **"BPGameItemWeapon"** that have been set up to deploy a debuff on the target when it is hit.



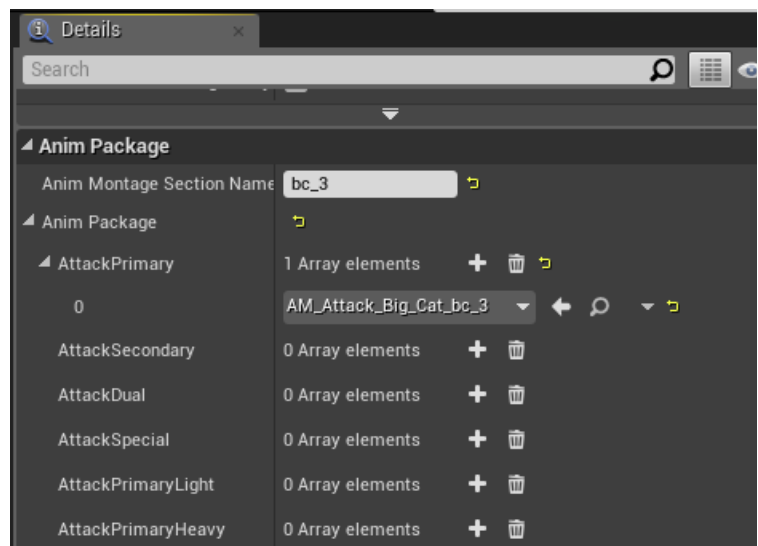
## VisualObject

This blueprint link is used to determine the animation montage the creature uses when attacking.

We won't go through this in detail - however - it's worth knowing about the Anim Package setup, since it is what links the actual animation package to the attack.

You can find this in the visualobject blueprint if you search for "Anim" in the details tab.

Doing so will show something like the image on the right, where we can see that the section of the montage that is used is called **"bc\_3"** and the animation package for this specific attack is called **"AM\_Attack\_Big\_Cat\_bc\_3"**.



Opening up this animation package will bring you to the animationpackage where you can set up hitboxes, sweeps, sounds and so forth for the animation. This is not covered in this guide.

## Damage Health Light on Hit

This sets the damage on the attack. Note that creatures do not differentiate between heavy and light attacks - all attacks are considered light if they are hooked up to this system as opposed to the Comborules.

## Max Attack Reach

This is the range of the attack. As mentioned early on in this guide when we set up the "TargetDistribution" component, the attack with the longest reach is used when the creature starts combat at its maximum distance value.

## Min Attack Reach

This is the minimum distance for the attack to be selected when in combat. For most attacks, it's safe to leave this at 0, but for long range attacks or charges/taunts you may want to have a longer distance for this stat.

## Armor Pen

This is the armor penetration of the attack. This float represents a % of armor penetration, meaning that a value of "0.05" is 5% armor reduction while a value of "1" would bypass armor completely. Use this carefully, as removing armor is one of the most powerful ways of increasing damage. However - you may want to use this for special attacks, or if you have a special attack for the creature with a long telegraph.

## Selection Weight

This determines how often the attack can be selected from the list of attacks the creature has. Each attack has its own selection weight, and these are all added into a pool when the creature is in combat and selected between. If you don't know how WeightedTables work, please refer to the "**Primer - What are Weighted tables.pdf**" primer included in this .zip file.

## Max Durability

This should be set to -1 for creature attacks

## Appendix - All communities in the game

1010 Sewer Abomination  
1100 Imp, Vulture  
2001 Locust, Werewolf  
2002 Rocknose  
2003 Hyena  
2004 Scorpion  
2005 DemonSpider, Spider  
2006 Cobra, Lava Wurm, Serpentman  
2008 DeathKnight, Domesticated Goat, Skeletal Serpentman, Undead  
2009 Crocodile, Komodo, Salamander, Undead Dragon  
2500 Frost Giant, Giant King  
2501 Sabretooth  
2800 Mountain Goat  
2999 Kudo, Gazelle, Fawn, Deer  
3000 Giant Snake  
3001 Rocknose King, Shaleback, Gorilla, Gray Ape, Yeti  
3002 Bat Demon, Camel  
3003 Bull, Rhino  
3004 Ostrich, Shoebill  
3005 Elephant  
3010 Boar  
3011 Bear  
3013 Jaguar, Panther, Sabretooth cub, Tiger  
3015 Elk  
3016 Wolf  
3999 Rabbit  
4001 Shaleback Baby  
4010 Boar Piglet  
4011 Bear Cub  
5000 Dragon  
10000 Default NPC Human  
20031 Undead Hyena  
30011 Undead Shaleback  
30031 Reptilian Monstrosity  
91000 Were-hyena