

## by Ken Gilliland

#### **Nature's Wonders**

## Moths of the World

Volume 4

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**Nature's Wonders** 

# Moths of the World

#### Volume 4

#### Introduction

Moths comprise a group of insects related to butterflies, belonging to the order *Lepidoptera*. This add-on set to "Nature's Wonders Giant Moth" includes 8 moth species with some amazing patterns and shapes. Take, for example, the Lygodium Spider Moth whose wing patterning resembles a spider ready to pounce or the White Plume Moth which would be at home in any fantasy movie. Also included is the White Witch-- considered the world's largest insect due to its 12 inch wingspan.

The set has both native DAZ Studio and Poser versions and supports Iray, 3Delight, Firefly and Superfly render engines.

#### **Overview and Use**

The set is located within the **Animals : Nature's Wonder** folder. Here is where you will find a number of folders, such as **Manuals, Resources** and **Fauna Libraries**. Let's look at what is contained in these folders:

- **Fauna Libraries:** This folder holds the actual species and poses for the "premade" fauna. The fauna for this set can be found in the following folder(s):
  - Insects/Moths of the World
- **Manuals:** Contains a link to the online manual for the set.
- **Props:** Contains any props that might be included in the set
- **Resources:** Items in this folder are for creating and customizing your fauna included in the set
  - Based Models: This folder has the blank, untextured model(s) used in this set. These models are primarily for users who wish to experiment with poses or customize their own species. When using physical renderers such as Iray and Superfly, SubD should be turned to at least "3". For DAZ Studios 3Delight renders, the SubD must be turned from the "High Resolution" setting to the "Base"

setting (otherwise some areas will render incorrectly transparent).

#### Loading a Moth using Poser

1. For this example, we'll create the Luna Moth.

2. Load Poser, select the FIGURES library and go to the "Animals", "Nature's Wonders" and then the Nature's Wonders Fauna Libraries Insect folder.

3. Go to the Moths of the World folder and select the Firefly or Superfly sub-folder.

4. Select the Luna Moth (or a moth of your choice) and load the model clicking the mouse.

#### Loading a Moth using DAZ Studio

1. For this example, we'll create the Luna Moth.

2. Load DAZ Studio and go to the "Animals", "Nature's Wonders" and then the Nature's Wonders Fauna Libraries Insects folder.

3. Go to the Moths of the World folder and select the Iray or 3Delight sub-folder.

4. Select the Luna Moth (or a moth of your choice) and load the model clicking the mouse.

#### Sizing & Poser Issues

All the moths included in this set have been scaled to their appropriate sizes in relation to human figure models. In some cases, these moths can be very, very small with a wingspan of around one-inch.

The size of the moths can produce some issues in Poser. The moth may disappear when the camera is in close focus. The "hither" setting on Poser's cameras is set to 0.800 by default. Reducing this setting to "0.0" will correct this issue.

A second issue can appear when rendering a small moth solely (without any other items in the scene). It will produce a default square shadow. It is a known bug with Poser. To correct this issue, include a second larger item off-screen and the shadows will render correctly.

Subsurface scattering does allow some translucency in the moth wings, but does add to render time. Non-Subsurface Scattering shaders have been included in the materials section for Poser users who cannot use SSS (Poser 8 and below) or who prefer not to use this effect. These alternative material settings must be applied **AFTER** the .pz2 (Material/Morph) pose is applied as it properly shapes the generic moth into the selected species.

## Lygodium Spider Moth (Siamusotima aranea)

This moth was newly discovered in 2005. It is from Thailand and has markings that look like a spider (possibly mimicry to protect it from predators). This moth has risen to significance because of its appetite for the Lygodium ferns, which have developed as an invasive weed that threatens Florida's wetlands.

While there are many stem-boring moths, it was the first to be identified among fern-feeders in Asia. The moth is unique in a number of ways. For one, its caterpillar form looks more like some beetle larvae. The moth has armored segments on its rear similar to those on beetles but unlike anything seen before in a moth. And the adult moth may mimic spiders, a characteristic that has led to its scientific name, "aranea," as well as its unofficial moniker.



## White Plume Moth (Pterophorus pentadactyla)

It is found in the West Palearctic including North Africa and Europe. In Britain, it is common in England and Wales but more localized in southern Scotland and in the coastal parts of western, southern, and eastern Ireland. It is typically found in rough grassland, on road verges, and in gardens. The wingspan is 26–34 mm (1.0–1.3 inches). It is uniformly white, with the hind wing pair divided in three feathery plumes and the front pair in two plumes. The moths fly from June to August. The larvae feed on bindweed (Convolvulus species). The moth is considered a pest species to sweet potato farmers.



## Goat Moth (Cossus cossus)

It is found in Northern Africa, Asia and Europe. It is a large heavy moth with a wingspan of 68–96 mm (2.7-3.8 inches). The wings are grayish brown and marked with fine dark cross lines. The moth flies from April to August depending on the location. The species prefer humid environments. Both the larva and moth have a smell reminiscent of goat, hence its name.

It has a preference for Populus, Quercus, and Salix.



#### African Death's Head Hawkmoth (Acherontia atropos)

They are commonly found in Southern Europe and throughout much of Africa, from where it is considered to be a native species. They do migrate to parts of Great Britain, where it is less commonly seen. They are large, ranging from a 80–120 mm (3.5 to 5 inches) wingspan as adults. The upper wings are dark, creating a stark contrast between them and the lower wings, which range from a bright yellow to a light cream, yellow being the more common.

This moth has made an appearance in the films The Silence of the Lambs (1991), Dracula (1958), and The Blood Beast Terror (1967).



## **Tau Emperor** (Aglia tau)

They are also known as "Giant Silkmoths" and are found in Europe and across Central Asia, all the way to the Pacific coast. Their genus, Aglia, is composed of 6 Palearctic (North European) species. The wingspan is 60–84 mm (2.4-3.3 inches). Females are slightly larger and paler.

The moth flies from March to July with a univoltine lifecycle depending on the location. The larvae primarily feed on European beech, but also birch, Alnus glutinosa, Salix caprea and Sorbus aucuparia. They can be found in older growth forests, with a large portion of trees in the Fagaceae family. They can also be found in younger riparian forests with less Fagaceae species present.



### White Witch (Thysania agrippina)

This species holds the record for the "largest" insect due to its wingspan which measures almost 300 mm (12 inches). It occurs from Uruguay to Mexico and has appeared as as vagrant as far North as Texas (in the United States).

One story of the derivation of the common name: early naturalists collected specimens of birds and bats with shotguns. An enormous darting flyer high in the canopy was a tempting target. Firing a cloud of pellets at a white witch moth did not necessarily bring it down, however, because the body is small relative to the wing area. The moth would sail along, just like an immortal witch.



## **Spurge Hawkmoth** (Hyles euphorbiae)

This European hawkmoth is used as an agent of biological pest control against the noxious weed leafy spurge (Euphorbia virgata). This moth was the first classical biological agent released against leafy spurge in the United States, with approval for introduction granted in 1965. Populations of this insect are present in several western states, including Montana, Idaho, and Oregon.

Adult moths are large with a 50-70 mm (2-2.8 inches). It is a day-flying moth that often exhibits a hummingbird-like flight while visiting flowers. The body is light brown with various white and dark brown markings, while the wings have a conspicuous tan, brown, and pink or red color pattern.



### **Narrow-bordered Bee Hawkmoth** (Hemaris tityus)

This moth, which resembles a bumble bee, has a wide range, from Ireland across temperate Europe to the Ural Mountains, western Siberia, Novosibirsk and the Altai. It is also known from the Tian Shan mountains eastwards across Mongolia to north-eastern China and southwards to Tibet. There is a separate population found from Turkey to northern Iran. It has a wingspan of 40–50 mm (1.6–2.0 inches).

It appears in May and June and is a lively daytime flier, generally active from mid-morning to mid-afternoon. It frequents marshy woodland and damp moorland, and has a wide distribution across temperate Europe and Western Asia. It is generally quite scarce. The larvae feed on Devil's-bit Scabious (Succisa pratensis) and Field Scabious (Knautia arvensis).



## Special Thanks to...

....my betatesters (Alisa and FlintHawk)

## **Species Accuracy and Reference Materials**

The author-artist has tried to make these species as accurate to their real life counterparts as possible. Moths of the same species vary considerably, just as all others do in nature. The moths were created using the correct field markings and the most common similarities.

With the use of one generic model to create dozens of unique moth species, some give and take is bound to occur. In addition, 3D-models have many technical challenges, which make exact representations difficult, if not impossible. It's best to think of these moths represented as resembling the particular species, and they may not, in some cases, be 100% scientifically accurate.

The model and morphs were created using Luxology's Modo. The texture maps were created in Corel's Painter. The model was rigged in Poser and materials created in Poser and DAZ's DAZ Studio.

#### Internet Sources:

- Wikipedia (<u>http://www.wikipedia.com</u>)
- Butterflies and Moths of North America (<u>http://www.butterfliesandmoths.org</u>)

