Nature's Wonders

Moths of the World

Volume 2

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Introduction

Moths comprise a group of insects related to butterflies, belonging to the order Lepidoptera. This set includes one of the largest moths in the world, the Atlas Moth with a wingspan of 250 mm (9.8 inches), which inspired the Japanese movie monster, Mothra. It also has some of the most spectacular patterned moths in the world such as the Decorated Beauty and the Crimson Speckled Flunkey, which defy believeablity.

Overview and Use

This set uses a common model to recreate digitally the moth species included in this volume. Each species uses specific morphs from the generic model to single-out it's unique features. **NOTE:** This is an "Add-on" set. It requires the product, Nature's Wonder Giant Moths from HiveWire3D.

Creating a Specific Moth using Poser

1. For this example, we'll create the Atlas Moth.
2. Load Poser, select the FIGURES library and go to the Nature's Wonders Insect folder.
3. To create a Atlas Moth, use the "Nature's Wonders Moth" base model.
4. Go to the POSES library and then to the Nature's Wonders Insect/Giant Moths folder.
5. Select the Atlas Moth (or a moth of your choice) and load/apply it to the Moth base model by clicking the mouse. This species pose contains both the morph and texture settings to turn the generic model into the selected moth.
6. If you are using Poser 8, you will also need to turn off Subsurface Scattering [because SSS (Translucency) is not available in Poser 8]. To do this, select the MATERIALS library and go to the Nature's Wonders Insect / Giant Moths / Non-SSS Shaders folder. Apply the Atlas Moth material shader to remove Subsurface scattering from the wings so that it will work in Poser 8 correctly. **IMPORTANT:** These alternative material settings apply the textures only. They must be applied AFTER the .pz2 pose is applied (Step 5) as this properly shapes the generic moth into the selected species.

Creating a Specific Moth using DAZ Studio

1. For this example, we'll create the Atlas Moth.
2. Load DAZ Studio and go to the "Animals"   "Nature's Wonders"   "Insects" folder.
3. To create a Atlas Moth, use the "Nature's Wonders Model" base model.
4. Go to the "Moths of the World" sub-folder and select the Atlas Moth (or a moth of your choice) and load/apply it to the Moth base model by clicking the mouse.

This species pose contains both the morph and texture settings to turn the generic model into the selected moth. The material settings are tuned for 3Delight rendering.

5. If you plan to render using the Iray renderer, then also apply the iray material settings to the moth. Iray materials are in a sub-folder inside the Moths of the World folder. These materials do not contain the morph settings, so it is important that you apply the default settings in the "Moths of the World" folder _first_.

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.

Atlas Moth *(Attacus atlas)*

It has a wingspan of 9.8 inches (250 mm) and is found in the tropical and subtropical forests of Southeast Asia, and is common across the Malay archipelago. Females are appreciably larger than males. Atlas moth silk is known as fagara. It is secreted as broken strands and is brown and wool-like. In India, these moths are cultivated for their silk in a non-commercial capacity. It is thought to have greater durability, than that produced by the related Silkworm moth (*Bombyx mori*). Japan only has the *A. a. ryukyuensis* subspecies which is native to the Yaeyama Islands, and is said to be the inspiration for the movie monster Mothra.

Atlas Moth

Hummingbird Hawkmoth (Macroglossum stellatarum)

It has a wingspan of up to 40-45 mm (1.6-1.8 in). It is distributed from Portugal to Japan, but is resident only in warmer climates (southern Europe, North Africa, and points east). It flies during the day, especially in bright sunshine, but also at dusk, dawn, and even in the rain, which is unusual for even diurnal hawkmoths. Adults are particularly fond of nectar-rich flowers with a long and narrow calyx, since they can then take advantage of their long proboscis and avoid competition from other insects. Examples of such plants include Centranthus, Jasminum, Buddleia, Nicotiana, Primula, Viola, Syringa, Verbena, Echium, Phlox, and Stachys.

Decorated Beauty (Anaxita decorata)

The wingspan is 37-50 mm (1.5-2 in).It is also known as the Mexican Beauty or Mexican Tiger Moth. It is found in Mexico and Central America.The caterpillar of the tiger moth feeds on various kinds of non-woody plants, as well as bushes and trees.
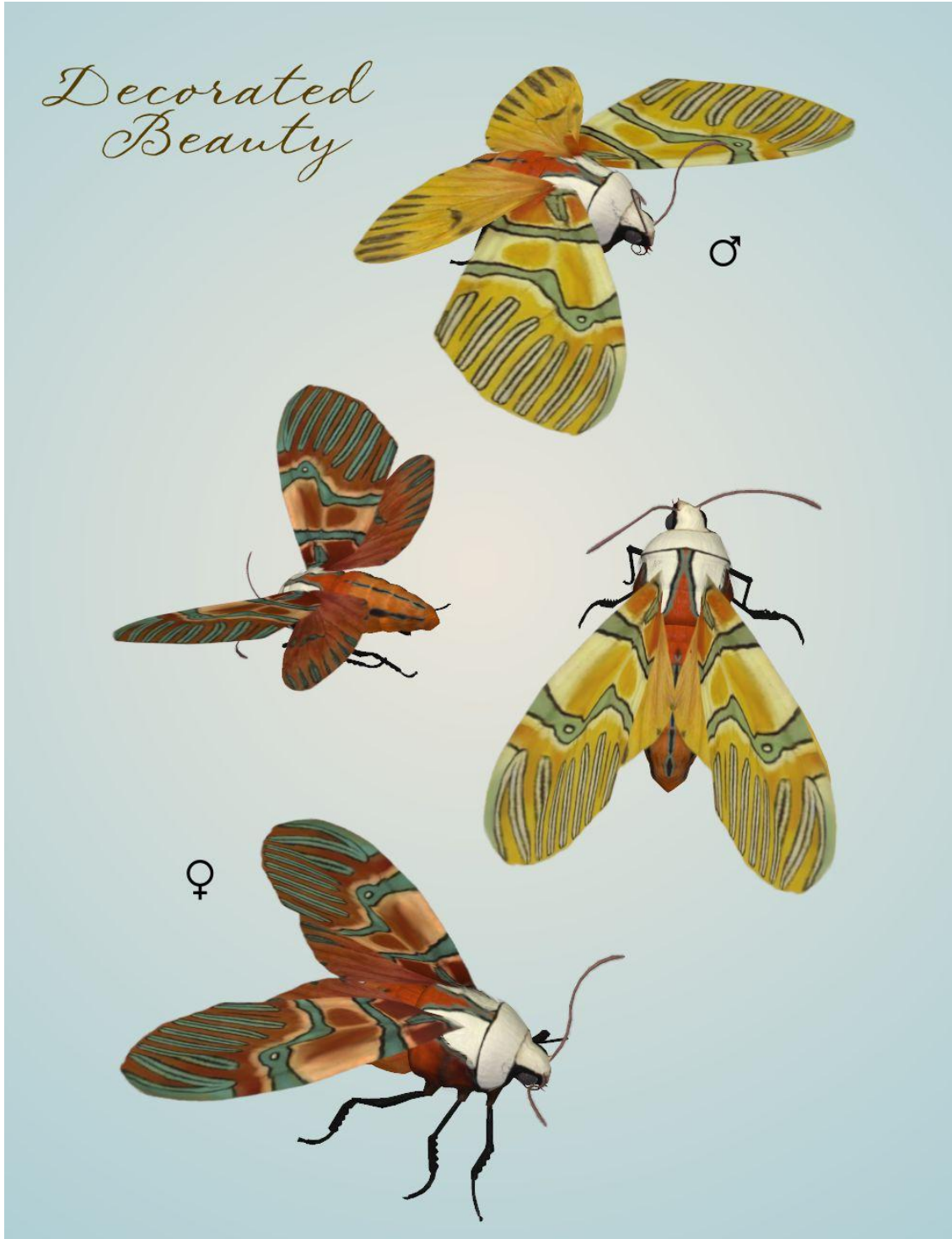
Suraka Silk Moth (Antherina suraka)

It has a wingspan of up to 100-130 mm (3.9-5.1 inches). It is found on Madagascar and Mayotte. Sexes are dimorphic with the female having a chocolate-brown hue to the male's orange-brown coloring. It is also called the Madagascan Bulls Eye Silkmoth. Caterpillars feed on species belonging mainly to families in the subclass Rosidae (Rose), although they also feed on those in the family Oleaceae (Olive) and Apocynaceae (Oleander, Vinca).

Six-spot Burnet (Zygaena filipendulae)

It has a wingspan of 30-40 mm (1.2-1.6 inches). This moth is commonly found throughout most of Europe. The adults fly on hot, sunny days from June to August, and are attracted to a wide variety of flowers (such as Thistle, Cornflower and other Knapweed species). The larval food plants are Bird's foot trefoil and clover.

Six-spot Burnet

Puriri Moth (Aenetus virescens)

It has a wingspan of 150 mm (5.9 inches). It is endemic to the North Island of New Zealand. The moth spends the first five to six years of its life as a grub in a tree trunk (including non-native species such as Eucalyptus), with the last 48 hours of its life as a moth.
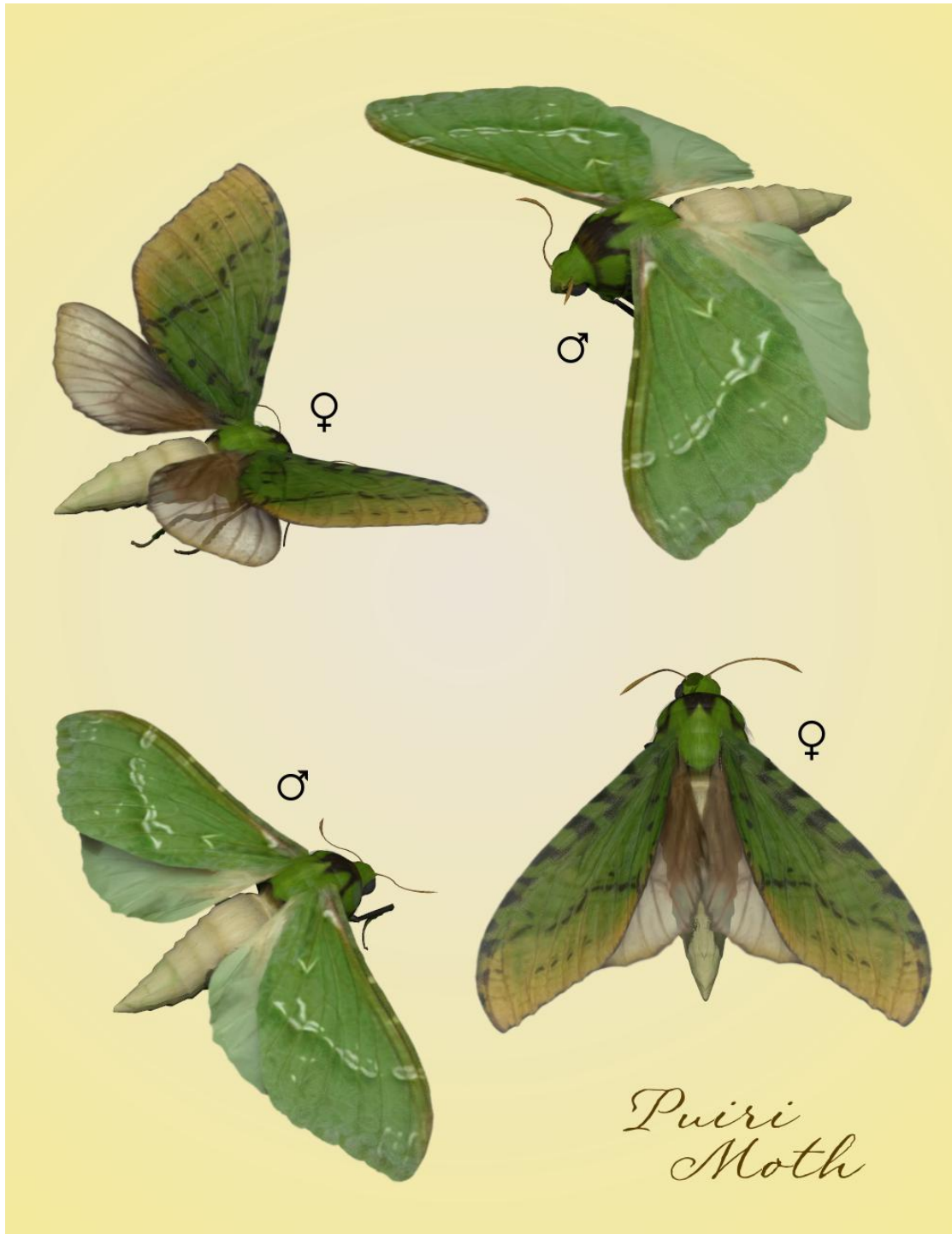
Crimson Speckled Flunkey (Utetheisa pulchella)

It has a wingspan of 29-42 mm (1.4-1.65 inches). It is found in Africa, Southern Europe, Central and Southern Asia and Australia. The larvae feed on Forget-me-not, Echium, Borago and Anchusa species.

Hearsey's Moth (Brahmaea hearseyi)

It has a wingspan of 200 mm (7.8 inches). It is distributed throughout Northeastern Himalaya, Burma, Western China, Sundaland and the Philippines.. The caterpillar eats Ligustrum, Syringa, and Fraxinus species.

Special Thanks to…

….my betatesters (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 Smith-Micro's Poser 2014 and materials created in Smith-Micro's Poser 2014 and DAZ's DAZ Studio.

Internet Sources:

- **Wikipedia** (http://www.wikipedia.com)
- **Pacific Northwest Moths** (http://pnwmoths.biol.wwu.edu/)
- **Butterflies and Moths of North America** (http://www.butterfliesandmoths.org)

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