

Avian Models for 3D Applications
Characters and Procedural Maps by Ken Gilliland

Songbird ReMix

Pelicans

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Songbird ReMix

Pelicans

Introduction


“Songbird ReMix Pelicans” includes all eight species of Pelican found throughout the world. Each pelican was digital recreated with a sharp focus on detail and the features Songbird Remix series users have come to expect such as real-time folding wings, webbed feet that can fold together and a large compliment of morphs . From the American Brown and White Pelicans to the exotic looking Peruvian and Pink-backed Pelicans, these birds from this package are a worthy centerpieces in any form of imagery.

Overview and Use

Select **Figures** in Runtime Folder and go to the **Songbird ReMix** folder. Here you'll find an assortment of files that are easily broken into 2 groups: **Conforming Parts** and **Bird Base models**. Let's look at what they are and how you use them:

- **Bird Base Models**
 - **Pelican Base Model** - This model is used specifically for Pelicans. Pelicans are totipalmate (4 front webbed toes) footed birds.
- **Conforming Parts** - No conforming parts are needed for this Songbird Remix volume. It is possible that with future add-on volumes and/or future free download Birds that they *may* be needed. (All Conforming Crests have alphanumeric icons in the lower right corners such as “**C09**”, “**C22**” or “**T03**”. This corresponds with characters in the Pose folders. All MAT/MOR files with the same icon use that particular Conforming Part. ***Be sure to read this:*** Most conforming parts are Crests, which cover the head part. When posing the Base Model, the Conforming Part will follow any Bend, Twist or Rotate Commands. It will not obey any **SCALE** or **MORPH** commands you give the Base Model. You must manually scale the Conforming Part and, with morphs such as “OpenBeak” or “Stretch”, you must also set its counterpart in the head part of the Conforming Crest.

Quick Reference for Conforming Parts

Load Model(s)	To Create... (apply MAT/MOR files)
	<ul style="list-style-type: none">All Pelicans included in this package



“Oh-oh,... this can’t be good” (Great White Pelicans are known to eat pigeons)

Creating a Songbird ReMix Bird

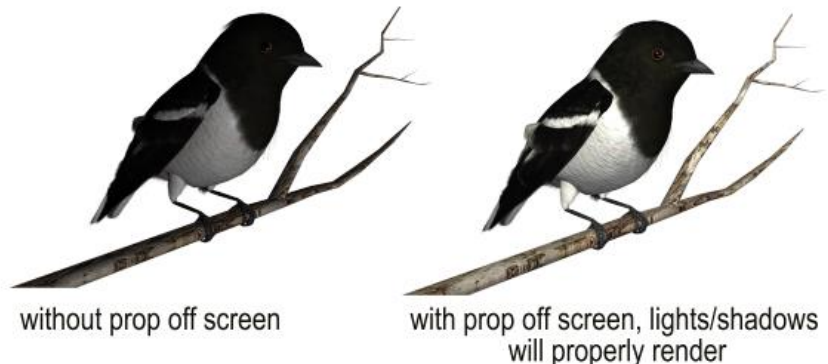
1. Choose what you want to load. For this example, we'll create a Pelican species.
2. Load Poser or DAZ Studio and select **FIGURES** and the Songbird ReMix folder. DAZ Studio users will select the "Poser Formats" → "My Library" → "FIGURES" → "Songbird ReMix".
3. Because all of the Pelicans use the "Pelican" base model we'll load that.
4. Go to the **POSES** folder and **Songbird ReMix** Master folder, then select the appropriate Songbird Remix library. This again, for DAZ Studio users will be found in the "Poser Formats" file section.
5. Select one of the Pelican Species and load/apply it by clicking the mouse on to our loaded Songbird ReMix base model. This species pose contains morph and texture settings to turn the generic model into the selected Pelican. It will automatically apply the correct DAZ Studio material settings if you are using DAZ Studio.

Displacement in Poser 5+

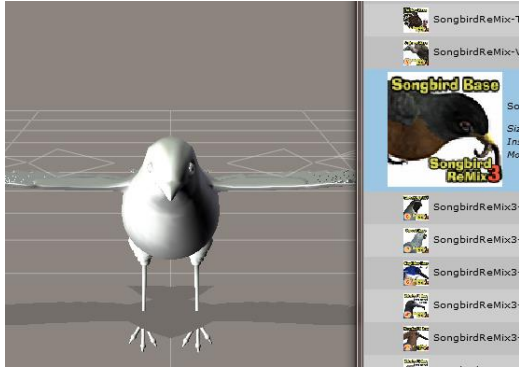
In Poser, several settings will help to bring out the best in this bird set. Under "Render Settings" (CTRL+Y) make sure you check "**Use Displacement Maps**" and (in some rare cases) the "**Remove Backfacing Polys**" boxes. In some poses, the wing morphs will expose backfacing polygons which tend to render black. Clicking the "Remove Backfacing Polys" fixes this.

Scaling and Square Shadows in Poser

All the birds in this package have to scaled proportionally to DAZ 3D's Victoria and Michael models. The smallest of the included birds **MAY** render with a Square shadow or improper lighting. This is a bug in Poser. Poser can't figure out how to render a shadow for something really small, so it creates a square shadow. The solution is to put a larger item that casts a normal Poser shadow in the scene (even if it is off camera) and the square shadows will be fixed or **BODY** scale the bird to a larger size.

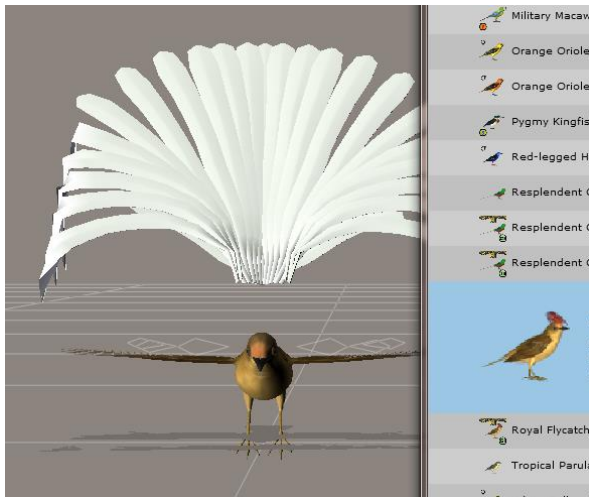
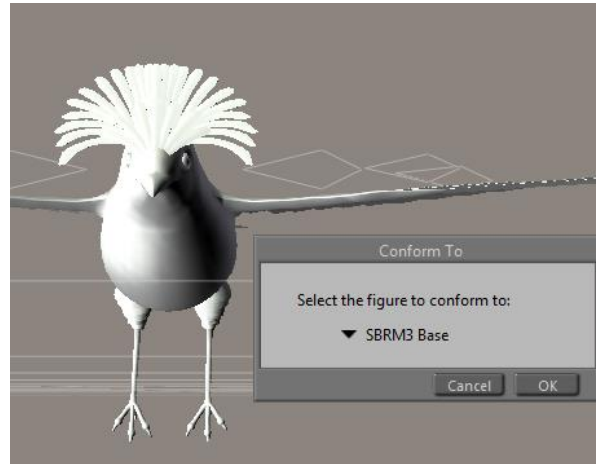


How to build a Songbird ReMix Character with a Conforming Crest in Poser



1. In the Figures section, load a Bird base Model. Then load the appropriate conforming part for the bird you're trying to create.
2. **Conform it** to the bird base model.

3. Select the Base Model and go to **POSES**. Select and apply the appropriate Character/Material pose setting for the bird you're creating.



4. The Conforming part will look wrong. That's okay—we're going to fix that now. Select the conforming part and apply appropriate Character/Material pose for the part.

5. Voila! Your bird is done. Just remember to select the bird base when posing and often there are additional morphs in the conforming part you can use.



Updates and Freebies

The Songbird ReMix series is constantly growing and improving. New morphs and additions to upcoming and future products often end up benefiting existing sets with new geometry, morphs and textures.

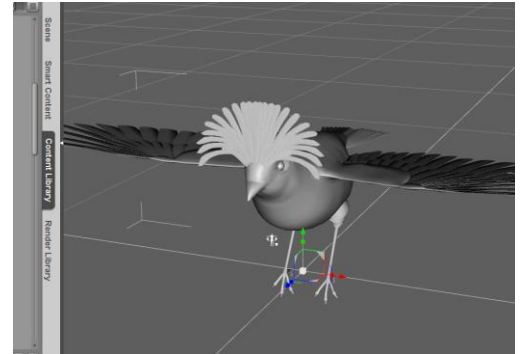
Songbirdremix.com always has the latest updates and additions to existing Songbird ReMix products (often months before they are updated at DAZ), plus the latest digital and real bird news, tutorials, videos, all the Field Guides, free bird characters, props and much more...

[Songbird ReMix.com](http://SongbirdReMix.com)

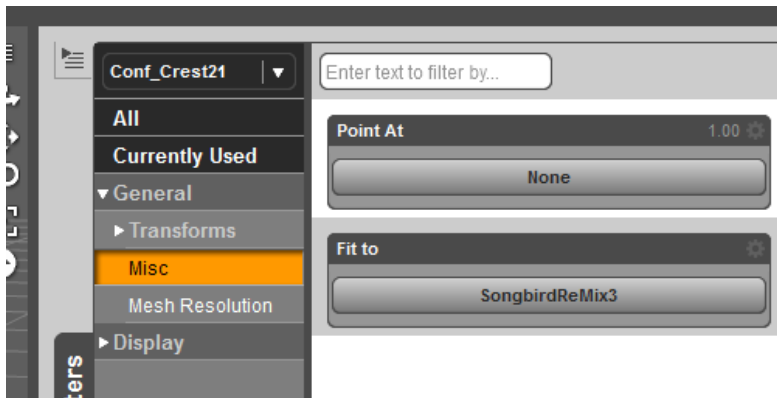


How to build a Songbird ReMix Character with a Conforming Crest in DAZ Studio

In the **Runtime** folder, select **Figures** and load the Songbird ReMix Model and the appropriate Conforming Crest in Studio. Select the Conforming Crest by selecting on the screen or in the **Scene** Tab.



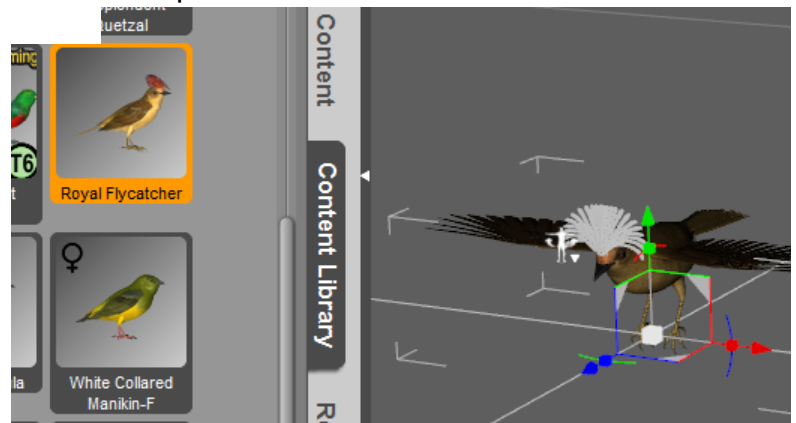
Now, using the "FIT TO" command in the Parameters Tab, Select the Songbird ReMix Model. Go back to the **Scene** Tab and select the Songbird ReMix Model.



Select the Studio **Content** Folder and go to the **Animals : SBRM : !CreateYour Own : Characters** folder and select the appropriate Songbird Remix library. Apply the Character setting to the bird base. It will probably reduce the size significantly and change the shape of the bird.

Now that the bird is sized, select the conforming part and apply the conforming part character settings.

Voila! Your bird is done. Just remember to select the bird base when posing and often there are additional morphs in the conforming part you can use.



Songbird ReMix

Pelicans

Field Guide

North America

American White Pelican
Brown Pelican

South America

Peruvian Pelican

Eurasia & Africa

Great White Pelican
Dalmatian Pelican

Asia

Spot-billed Pelican

Africa

Pink-backed Pelican

Australia

Australian Pelican

Common Name: American White Pelican
Scientific Name: *Pelecanus erythrorhynchos*

Size: 50-70 inches (130-180 cm)

Habitat: North America. **Summer Range:** Breeds throughout the northern Great Plains and mountain west in the United States. **Winter Range:** Winters in the Southern United States to Central America. This pelican is found on the coast, in wetlands and inland lakes.

Status: Least Concern. **Global Population:** 180,000 mature individuals. There was a pronounced decline in American White Pelican numbers in the mid-20th century, perhaps attributable to the excessive spraying of DDT and other



pesticides in agriculture as well as widespread draining and pollution of wetlands. But populations have recovered well after stricter environmental protection laws came into effect, and are stable or slightly increasing today. All Pelicans in the United States are protected by the Migratory Bird Treaty Act of 1918.

Diet: Fish and some marine invertebrates. Prey is caught by fishing from the water surface.

Nesting: Sexes are alike. Immature birds have light grey plumage with darker brownish nape and remiges. Their bare parts are dull grey.

They breed at inland lakes and are colonial breeders, with up to 5,000 pairs per site. The birds arrive on the breeding grounds in March or April. The nest is a shallow depression scraped in the ground, in some twigs, sticks and. After about one week of courtship and nest-building, the female lays a clutch of usually 2 or 3 2-3 chalky white eggs. Both parents incubate for about one month. The young leave the nest 3-4 weeks after hatching; at this point, usually only one young per nest has survived. Hatchlings are naked at first, and then grow white down feathers all over, before molting to the immature plumage.

Cool Facts: The American White Pelican is one of the largest birds in North America. The White Pelican does not dive for fish as the Brown Pelican does. Instead, it dips its head underwater to scoop up fish. Several pelicans may fish cooperatively, moving into a circle to concentrate fish, and then dipping their heads under simultaneously to catch fish.



Common Name: Brown Pelican

Scientific Name: *Pelecanus occidentalis*

Size: 42-54 inches (106-137 cm)

Habitat: North America & Northern South American.

Summer Range: Breeds in scattered locations along coasts from Maryland southward around Florida and westward to southern Texas and Mexico, to Honduras. On Pacific Coast from southern California to South America. Also in Caribbean and northern South America. Wanders widely after breeding, north to British Columbia and New England.

Winter Range: Winters along both coasts from central California and Virginia southward to South America. This pelican is only found on coastal regions and will not visit inland lakes. It prefers warm coastal marine and estuarine environments.



Status: Least Concern /Vulnerable. **Global Population:** 300,000 mature individuals. The Brown Pelican population declined severely in the first half of the 20th century. Shooting for feathers, "protecting" fishing caused declines in pelican populations, pesticide poisoning (especially by DDT) caused severe declines across the range in the late 1950's and the extirpation from Louisiana ("the pelican state"). It was listed as Endangered throughout the range in 1970. The ban on DDT led to a population recovery, and it was removed from the Endangered Species list in Atlantic Coast states in 1985. Breeding numbers in most states are stable or increasing, and the total population in the United States now exceeds historical levels. Pelican populations took a hit in Gulf Coast region from the 2010 BP Oil spill. Populations on the western coast are still protected.

All Pelicans in the United States are protected by the Migratory Bird Treaty Act of 1918.

Diet: Fish and some marine invertebrates. Prey is usually caught by an aerial dive into the ocean.

Nesting: Sexes look alike; males slightly larger. **Coloration:** Immature juvenile are dirty brown all over with white belly, pale line along middle of the under wings. Their bills are gray-brown. Yearlings are similar, but grayer on back and with some white feathers on sides of head and neck. Bills become paler and may have some yellow or orange.

It breeds primarily on islands. Nests are large flat bowl of sticks lined with grasses or leaves. It is placed in short trees, shrubs, or on ground. Pelicans nests in colonies, often with herons and other water birds. 3 chalky white eggs are laid. Unlike most birds, which warm their eggs with the skin of their breasts, pelicans incubate their eggs with their feet. They hold the eggs under the webs that stretch from the front toes to the hind toe, essentially standing on the eggs to warm them. This peculiar incubation method made them vulnerable to the effects of the pesticide DDT. The DDT made the eggshells thin, and the incubating parents frequently cracked their eggs.

Cool Facts: It is unique among the world's seven other species of pelicans as it is found only along the ocean shores and not on inland lakes. It and the Peruvian Pelican are the only pelicans that dive from the air into the water to catch its food.

While the Brown Pelican is draining the water from its bill after a dive, gulls often try to steal the fish right out of its pouch. They sometimes even perch on the pelican's head or back and reach in. The pelican itself, however, is not above stealing fish from other seabirds. It also follows fishing boats and hangs around piers for handouts.

The Brown Pelican frequently lowers its head onto its shoulders with the bill open, pulls its head back, and stretches the pouch over its throat and neck. The exposed neck looks like a large lump sticking up out of the pouch.

Common Name: Peruvian Pelican
Scientific Name: *Pelecanus thagus*

Size: 60 inches (150 cm)

Habitat: South America. Restricted to the coast of central Peru and Chile

Status: Near Threatened. **Global Population:** 100,000 - 1,000,000 mature individuals. It is likely to have been as badly affected by the El Niño event of 1998 as other Humboldt Current species such as Inca Tern (*Larosterna inca*), which declines over this period approached 30%. Pelicans are notoriously susceptible to disturbance at breeding colonies, either intentional (e.g. by fishermen), or unintentional (e.g. by tourists). Although the population may currently exceed 500,000 mature individuals, this is a fraction of former numbers and numbers fluctuate greatly in association with El Niño, and with numbers of schooling anchovetas.



Diet: Fish and some marine invertebrates. This Pelican has strong preference for Peruvian Anchovetas (*Engraulis ringens*). It feeds by diving into the water from flight, like the Brown Pelican.

Nesting: It breeds in large colonies on rocky coasts, feeding in shallow offshore waters along the coast on small schooling fish.

Cool Facts: It used to be considered a subspecies of the Brown Pelican (*Pelecanus occidentalis*). The Peruvian birds are nearly twice the bulk of the Brown Pelican, averaging 15.4 lb (7 kg) in weight; they are also longer, measuring about 5 ft (1.5 m) overall.

Common Name: Great White Pelican
Scientific Name: *Pelecanus onocrotalus*

Size: 63 inches (160 cm)

Habitat: Europe, Asia and Africa; they breeds from southeastern Europe through Asia and in Africa in swamps and shallow lakes. More than 50% of White Pelicans breed in the Danube Delta. This pelican migrates short distances, wintering in northeast Africa.



Status: Least Concern. **Global Population:** 270,000 - 290,000 mature individuals. This species has declined greatly through habitat loss and persecution. The White Pelican is one of the species to which the “Agreement on the Conservation of African-Eurasian Migratory Waterbirds” (AEWA) applies.

Diet: Fish and some marine invertebrates. Prey is caught by fishing from the water surface. This pelican is known to also eat unsuspecting birds (primarily pigeons) as recorded at St. James's Park in London. They swallow them whole and still alive.

Nesting: Males are larger than females, and have a long beak that grows in a downwards arc, as opposed to the shorter, straighter beak of the female.

Immature birds are grey and have dark flight feathers. The tree nest is a crude heap of vegetation. All Pelicans nest in colonies.

Cool Facts: There is a group of three semi-wild white pelicans living on Pelican Island, St. James's Park in London. Their ancestors were originally given to Charles II by Russian Ambassadors in 1664 which initiated the tradition of ambassadors donating the birds. These particular descendents are noted as being the “pigeon eaters” of the park.

Pelecanus onocrotalus also known as the “Eastern White Pelican”.

Common Name: Dalmatian Pelican
Scientific Name: *Pelecanus crispus*

Size: 67 inches (160-180 cm)

Habitat: Eastern Europe and east-central Asia; in Serbia and Montenegro, Albania, Greece, Romania, Bulgaria, Russia, Azerbaijan, Turkey, Ukraine, Mongolia, Iran, Turkmenistan, Uzbekistan and Kazakhstan. European breeders winter in the eastern Mediterranean countries, Russian and central Asian breeders in Iran, Iraq and the Indian subcontinent, and Mongolian birds along the east coast of China, including Hong Kong. Found in inland swamps, shallow lakes, freshwater wetlands but also at coastal lagoons and river deltas.

Status: Vulnerable. **Global**

Population: 10,000 - 13,900 mature individuals. Former declines were primarily caused by wetland drainage, shooting and persecution by fishermen. Continuing threats include disturbance from tourists and fishermen, wetland alteration and destruction, water pollution, collision with overhead power-lines and over-exploitation of fish stocks. Hunting by herders (for traditional use of the bill) continues to threaten the Mongolian population. Nest predation by wild boar at times of low water levels is the most important threat to the Bulgarian breeding colony. The Dalmatian Pelican is one of the species to which the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) applies.

Diet: Fish and some marine invertebrates. Prey is caught by fishing from the water surface.

Nesting: Males have a red lower mandible in the breeding season. Immatures are grey. Nests are a crude heap of vegetation. All Pelicans nest in colonies.

Cool Facts: They give barking, hissing and grunting calls at colonies which number about 250 pairs.



Common Name: Spot-billed Pelican
Scientific Name: *Pelecanus philippensis*

Size: 49-60 inches (125-152 cm)

Habitat: Asia; breeds in India, Sri Lanka and Cambodia. Found inland and at coastal waters, especially shallow lakes.

Status: Near Threatened.

Global Population: 13,000 - 18,000 mature individuals. This species has declined at a moderately rapid rate owing to a number of threats. A crucial factor in its decline was the loss of the Sittang valley breeding colony in Myanmar through deforestation and loss of feeding-sites. Key threats are a combination of human disturbance at breeding colonies and wetlands, extensive felling of nesting trees, hunting and poaching of eggs and chicks. Additional threats include loss of important feeding-sites through siltation, agricultural intensification, aquaculture development, drainage and conversion of wetlands, declines in wetland productivity as a result of pesticide use, and over-exploitation of fisheries. There is some persecution resulting from competition between the birds and fishers. A potential but as yet unqualified threat is posed by avian influenza. The Philippines population is extinct.



Diet: Fish and some marine invertebrates. Prey is caught by fishing from the water surface.

Nesting: The nest is a heap of vegetation in a tree. Three to four eggs is the usual clutch size. All Pelicans nest in colonies.

Cool Facts: Pakistan has designated it as the provincial bird of Sindh.

Common Name: Pink-backed Pelican
Scientific Name: *Pelecanus rufescens*

Size: 42-54 inches (106-137 cm)

Habitat: Africa; breeds in Africa, southern Arabia and apparently now extinct in Madagascar. Found in swamps and shallow lakes.

Status: Least Concern. **Global Population:** 50,000 - 100,000 mature individuals. This species has a large range and is widespread however there have been significant population declines. There are threats by habitat loss in KwaZulu-Natal, as many suitable pans and flood-plains are being altered through drainage and cultivation, and the natural flooding regime of pans in the Pongolo system has been altered by the Jozini Dam. In southern Africa disturbance of the species is increasing at estuaries as these areas become more intensively used and developed. The species is also susceptible to bioaccumulation of toxins in their body tissue, which may lead to a decline in reproductive success. Destruction of nesting trees due to logging activities is a problem as well.



Diet: Fish and some marine invertebrates. Prey is caught by fishing from the water surface in groups.

Nesting: Breeding adults have long feather plumes on the head. The nest is a large heap of sticks, into which 2-3 large white eggs are laid. The chicks feed by plunging their heads deep into the adult's pouch and taking the partially digested regurgitated fish. All Pelicans nest in colonies.

Cool Facts: This pelican was originally called the "Grey Pelican". It is locally nomadic in southern Africa in response to changing wetland conditions, and western African populations make northward movements into sub-Saharan steppe during the wet season, returning southwards in the dry season.

Common Name: Australian Pelican
Scientific Name: *Pelecanus conspicillatus*

Size: 60-70 inches (160-180 cm)

Habitat: Australia, Papua New Guinea and western Indonesia, with occasional reports in New Zealand and Sulawesi. Any area with a large body of standing water is a potential pelican habitat. Though normally associated with the coast, the Australian pelican can also be seen inland at times of high rainfall,

particularly near freshwater, estuarine and marine wetlands and waterways including lakes, swamps, rivers, coastal islands and shores.



Status: Least Concern. **Global Population:** 100,000 - 1,000,000 mature individuals. This species has a large range and is widespread however there have been significant population declines; habitat destruction, introduced predators, oil spills, and pesticide poisonings (dieldrin in particular) have killed many birds.

Diet: Fish and some marine invertebrates. In addition to small fish, they will eat crustaceans, tadpoles, turtles, ducklings and sea gulls. Prey is caught by fishing from the water surface.

Nesting: The Australian Pelican begins breeding at two or three years of age. Breeding season varies, occurring in winter in tropical areas and late spring in parts of southern Australia. Any time after rainfall is usual in inland areas. The nest is a shallow depression in earth or sand, sometimes with some grass lining. Grassy platforms are constructed at Lake Alexandrina in South Australia. Nesting is communal, with colonies located on islands or sheltered areas in the vicinity of lakes or the sea.

Breeding Australian pelicans will lay one or three chalky-white eggs. After they hatch, the larger one will be fed more, and the smaller one will eventually die of starvation. For the first two weeks the chicks will be fed regurgitated liquid, but for

the remaining two months they will be fed fish such as goldfish or the introduced European carp, and some invertebrates.

Cool Facts: Australian pelicans may live 25 years or longer. They mostly feed in groups, cooperating to herd and enclose schools of fish, then swoop down on their trapped prey. They can eat up to 9 kilograms of food per day. They have been known to follow humans homes, hoping to be feed.



Special Thanks to...

....**my beta team** (Bea, Jan, Kelvin, Nancy, Rhonda, Sandra and Walter)

Species Accuracy and Reference Materials

Many birds of the same species do vary considerably in color. This package tries to emulate the colors and markings in the most commonly found variants.

The author-artist has tried to make these species as accurate to their real life counterparts as possible. With the use of one generic model to create dozens of unique bird species, some give and take is bound to occur. The texture maps were created in Painter with as much accuracy as possible. Photographic references from photographs from various Internet searches and several field guides were used.

Field Guide Sources:

- **“The Sibley Guide to Birds”** by David Allen Sibley
- **“Ocean Birds”** by Lars Löfgren
- **All About Birds/Cornell** (<http://www.birds.cornell.edu/AllAboutBirds/>)
- **Wikipedia** (<http://www.wikipedia.com>)
- **BirdGuides.com** (<http://www.birdguides.com>)
- **Birdlife International** (<http://www.birdlife.org>)

Other Resources:

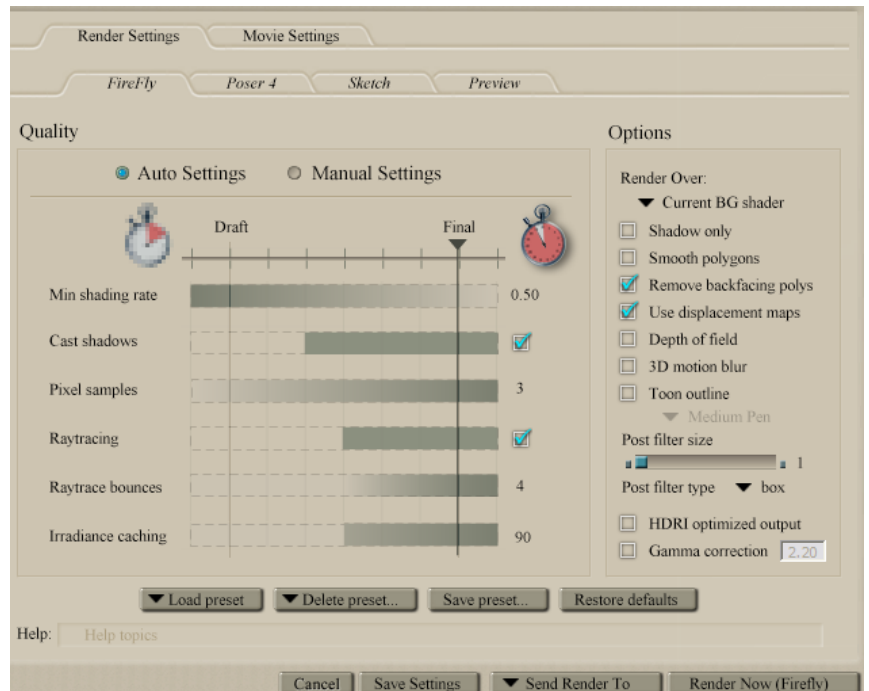
- **Songbird ReMix Central** (<http://www.songbirdremix.com>)
- **Songbird ReMix “Bird Brains” User Group and Forum** (<http://artzone.daz3d.com/groups/songbirdremix>)

Rendering Tips

In POSER 5+...

In Poser, several settings will help to bring out the best in this bird set.

Under “Render Settings” (CTRL+Y) make sure you check “**Use Displacement Maps**” and (in some cases) the “**Remove Backfacing Polys**” boxes. In some poses, the wing morphs will expose backfacing polygons which tend to render black. Clicking the “Remove Backfacing Polys” fixes this.



In VUE...

Vue has trouble with back-facing polygons which tend to show-up in certain wing poses. The easiest and fast solution is to limit the amount of bending in the Forearm, Hand and Feather controllers.

The better (but much slower solution) is to in “Polygon Mesh Options”, bake the model. You might also click “Force double-sided baking” as well as playing with the Max smoothing angle and checking Dynamic Subdivison. Put Quality boost into the + area. Then bake it—“baking” will take hours on most computers.

Also the “Eye” material uses a Poser reflection map; since Vue has a built-in environment, it’s better to use the Vue one and cut down the reflection to 20-50% depending on light in the scene.

The Songbird ReMix Store



The Songbird ReMix eStore has a wide variety of avian art on T-Shirts, Coffee Mugs and more!

www.empken.com/store