

Songbird  
ReMix

# Waterfowl

## Volume 3: Swans of the World



Avian Models for 3D Applications  
Characters and Texture Mapping by Ken Gilliland

## Songbird ReMix

# Waterfowl: Swans of the World

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## Songbird ReMix

# Waterfowl: Swans of the World

## Introduction

The swans are the largest members of the waterfowl family, and are among the largest flying birds. Swans have been considered symbols of romanticism through the ages due to their graceful appearance and fidelity. From Norse, Greek and Roman mythology to Hans Christen Anderson's "The Ugly Duckling", Richard Wagner's "Lohengrin" and "Parsifal", and Nicaraguan poet, Rubén Darío work, swans have played key roles in culture.

Male swans are known as "cobs" and females as "pens". Young Swans are known as 'cygnets'. A group of swans is known as a "bank" and in flight as a "wedge".

"Songbird ReMix Waterfowl: Swans of the World" includes all seven species of swan found throughout the world and the extinct Giant Swan from the Middle Pleistocene.

## Overview

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

- **Bird Library:** This folder holds the actual species and poses for the "premade" birds. Birds are placed into a "type" folder (such as "Birds of Prey (Order Falconiformes)" which for example would hold falcons, hawks and eagles). The birds for this set can be found in the following folder(s):
  - **Waterfowl (Order Anseriformes)**
- **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 birds
  - **Bird Base 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 of bird. With using physical renderers such as Iray and Superfly, SubD should be turned to at least "3".

## Poser Use

Select **Figures** in the **Runtime** Folder and go to the **Animals : Songbird ReMix** folder. Select the bird from the renderer (*Firefly* or *Superfly*) folder you want and simply click it to load. Some birds in the Songbird ReMix series may load with attached parts (*Conformers*) such as tail or crest extensions. Some of these parts have specific morphs. You will need to click on the attached part to access those controls. Associated poses can be found in the same folder- **Bird Library : (Type) : Poses**.

## DAZ Studio Use

Go to the **Animals : Songbird ReMix** folder. Select the bird from the renderer (*3Delight* or *Iray*) folder you want and simply click it to load. Some birds in the Songbird ReMix series may load with attached parts (*Conformers*) such as tail or crest extensions. Some of these parts have specific morphs. You will need to click on the attached part to access those controls. Associated poses can be found in the same folder- **Bird Library : (Type) : Poses**. **Note:** Using the "Apply this Character to the currently selected Figure(s)" option **will not** properly apply the correct scaling to the bird selected. It is better to delete the existing character first and load the one you want to use.

## Physical-based Rendering

**Iray** and **Superfly** requires more CPU and memory horsepower than the legacy renderers because of ray-trace bounces and higher resolution meshes needed for displacement. Poser's **Superfly** renderer will require that the "Min Transparent Bounces" be set to at least 16 and that the "Max Transparent Bounces" be set to at least 32 in render settings. Superfly renders may show artifacts in the head area. This is a known Poser issue and may be addressed in the future. Increasing the SubD may minimize this issue.

## Where to find your birds

Type Folder	Bird Species
<b>Waterfowl (Order Anseriformes)</b>	Mute Swan Black Swan Black-necked Swan Whooper Swan Trumpeter Swan Tundra Swan Bewick's Swan Giant Swan (extinct)

## Where to find your poses

Type Folder	For what species?
<b>Waterfowl (Order Anseriformes)</b>	All Ducks



## Morphs and their Use

All Songbird ReMix models have morphs that change the look of the loaded model to achieve additional movements and expressions that joint movements can't achieve. These are referred to in the Songbird ReMix model as "Action Morphs". Other morphs that are included can subtly or sometimes dramatically, alter the model to resemble specific waterfowl species. These morphs are referred to as "Creation Morphs".

Here is a brief explanation of where the morphs are found and what they do:

### BODY section:

- **Action Morphs**
  - **Common Controls**
    - BillOpenClose- Controls the opening and closing of the bill
    - EyesFwdBack - Controls the forward and backward movement of the eyes
    - EyesUpDwn - Controls the up and down movement of the eyes
    - EyeLidsCloseOpen - Controls the opening and closing of both eyelids
    - Unspread (left and right) Feet- Brings the webbed feet to a folded position (as they'd be, for instance in flight).
    - WingsFold- Puts both Wings into a folded position. The control activates the CoverWingFold fluff morph. *This morph cannot be used in conjunction with the Defensive wing fold.*
    - DefensiveWingsFold- This wing fold is a behavioral position the folded wings are held at when a swan is threatened. *It cannot be used in conjunction with the normal wing fold.*
  - **Wing and Tail Controls**
    - These controls allow both wings and each individual wing to perform numerous wing actions and also the Tail feather actions like fanning, cupping and bending.
  - **Neck Bending**
    - These controls allow global bending, twisting and moving side-to-side of the seven neck sections. Partial bending controls can also be found in each individual neck section.
  - **Head Controls**
    - Exp-Smile- Creates a smile expression
    - Exp-Frown- Creates a frown expression
    - **Bill Movement Section**- has individual controls for upper and lower mandibles. The BillOpenClose uses both of the morphs in this section and these morphs will NOT work unless BillOpenClose is set to 0.

- **Eyelid Movement Section**- has individual controls for upper and lower eyelid on both eyes, as well as EyeWink controls for both eyes. The EyeWink controls use the upper and lower eyelid morphs and the EyeLidsCloseOpen control uses BOTH EyeWink controls.
- **Tongue Movement Section**- various morphs control the movement of the tongue.
- **Fluff Morphs**
  - CrestLength- Controls the Length of the crest (top of duck's head)
  - CrestFrontUp- Pulls the forehead part of the crest forward/up
  - CrestTopUp- Pulls the middle part of the crest forward/up
  - CrestBackUp- Pulls the back part of the crest forward/up
  - JowlFluffOut- Pulls the feathers under the eye area (jowls) out.
  - ThroatFluff- Pulls the feathers on the throat area out.
  - Back Ruffle- Ruffles the transparency feathers on the back of the bird
  - BreastFluff- Controls the transparency feathers on the breast of the bird
  - ThighFluff- Controls the transparency feathers on both thighs of the bird
  - RumpTopFluff- Controls the transparency feathers on the topside rump/tail of the bird
  - RumpBtmFluff- Controls the transparency feathers on the underside rump/tail of the bird
  - RumpSidesFluff-Reduces the Fluff on the sides of the rump
  - **Fluff Over Folded Wings**
    - CoverWingFold- Moves Breast and Flank Fluffs to partially cover the lower edge of the folded wings. It is automatically turned on with the WingsFold control. You can also turn off this control by dialing it to -1.
    - FlankFluffOut- Pulls the feathers on the flanks (below each wing) out.
    - FlankFluffExpand- Enlarges the Flank Feathers to better hide the folded wing edges ([see Tutorial](#))
    - FlankFluffDroop- Droops Flank Feathers
    - PullTopFlankFeathers & 2- Pulls tops of Flank Feathers in and out
  - **Fluff Under Folded Wings**
    - TuckAllFluff- Tucks all Fluff Controls found in this section under the wings
    - TuckBreastFluff- Tucks Breast Fluff sides in under the wings
    - TuckBackFluff- Tucks Back Fluff sides in under the wings
    - TuckFlankFluff- Tucks Flank Fluff sides in under the wings
    - TuckRumpFluff- Tucks Rump Fluff sides in under the wings
- **Correction Morphs**
  - Adj-HeadNeck- fills a dip in the back of the head that might occur in some poses, especially head stretched out for flight.

- Adj-RumpThinner- thins the Rump, hip and tail sections to prevent folded wing intersections that might occur in some poses.
- **Creation Morphs**
  - Neck Length (LLength)- Allows retracting and extending of the neck.
  - StubbyTalons- Decreases or increases the length of the talons on the webbed feet.
  - BreastCrease- Creates a center crease on the breast.
  - RumpSleeker- Controls the size of the rump.
  - RumpTopWidth- Controls the transparency feathers on the topside rump/tail of the bird width.
  - RumpBtmExtend- Controls the transparency feathers on the underside rump/tail of the bird length.
  - RumpShorten- ZScales the length of the Rump
  - **Species Shapes**- These morphs create very specific looks to resemble certain species of Swan and include (generic) Swan, BlackSwan, BlackneckedSwan, MuteSwan, TrumpeterSwan, TundraSwan and WhooperSwan.
  - **Head Shaping**
    - **Head Shapes**- These morphs control the shape of the head.
      - Hd-BrowsOut- Pulls the area above each eye outwards.
      - Hd-BackSq- Adds mass to the back of the Head.
      - Hd-CrownUp- Raises the Crown of the Head.
      - Hd-ForeheadLow- Reduces the forehead extending to the bill.
      - Hd-ForeheadFwd- Adds to the forehead extending to the bill.
      - Hd-ForehdCtrOut- Adds to the forehead center between the bill.
      - Hd-JowlsExpand- Expands the cheeks of the duck.
      - Hd-HideEar- Removes the ear holes.
    - **Eye Shapes**- These morphs can change the appearance of the eyes.
      - EyesDilate- Controls the pupil size of the eyes
    - **Bill Shapes**- These morphs can change the appearance of the bill.
      - Bill-Length- Controls the length of the entire bill.
      - Bill-UprLength- Controls the length of the upper bill.
      - Bill-LwrLength- Controls the length of the lower bill.
      - Bill-Point- Brings the end of the bill to a point.
      - Bill-Merganser- Creates the narrow bill of a Merganser.
      - Bill-Scaup- Creates the bill of a Scaup.
      - Bill-Scoter- Creates the bill of a Scoter.
      - Bill-Shoveler- Creates the bill of a Shoveler.
      - Bill-Slope- Adds or reduces the slope of the upper bill.
      - Bill-TipFoward- Extends the center portion of the tip of the upper bill.
      - Bill-TipBulb- Creates a bulbous tip on the upper bill.
      - Bill-TipBulbTop- Makes the bulbous tip on the upper bill more pronounced.

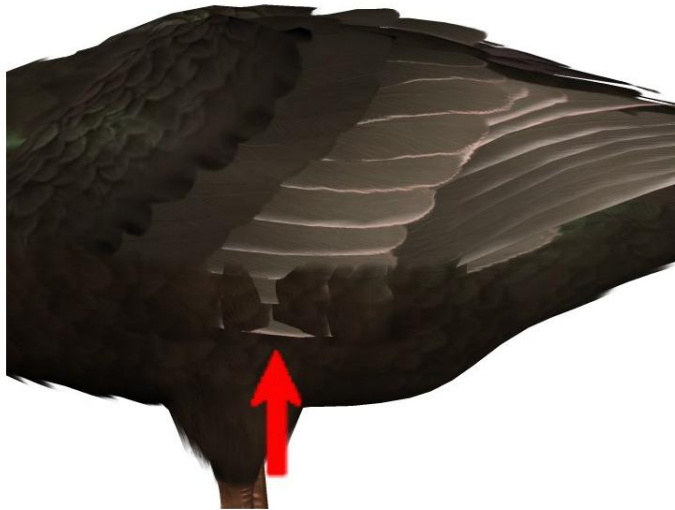
- Bill-TipHook- Creates a stronger hook on the upper bill.
- Bill-NoseBridge- Lessens the slope of the bill to the forehead.
- **Nostril Shapes**
  - Nostril-Fwd- Moves the nostrils on the bill forward.
  - Nostril-Size- Controls the size of the nostrils on the bill.
  - Nostril-Ridge- Adds a ridge to the nostrils on the bill.
  - Nostril-Slit- Creates slit-shaped nostrils on the bill.
  - Nostril-Tear- Creates tear-shaped nostrils on the bill.
- **Tongue Shapes**
  - Tng-Length- Controls the length of the tongue.
  - Tng-Width- Controls the width of the tongue.
- **Wing Shapes**- These morphs control the shape of the wings.
  - WingSpan- Allows control of Wing Length
- **Tail Shapes**- These morphs control the shape of the tail feathers
  - Round- Rounds the Tail feathers.
  - Length- Controls the length of the Tail feathers.
  - Width- Controls the width of the Tail feathers.
  - PointEnds- Makes Tail feathers have pointed ends.
  - SquareEnds- Makes Tail feathers have square ends.
- **Scale**- Controls the size of the model





## Working with Fluff Controls

In this example we see that the Flank Fluffs haven't adequately covered the folded wings. To correct this, go under the **"Feather Fluff Controls"** and select the **"FlankFluffExpand"** morph.



**Songbird ReMix**

# Waterfowl: Swans of the World

## Field Guide

Mute Swan

Black Swan

Black-necked Swan

Whooper Swan

Trumpeter Swan

Tundra or Whistling Swan

Bewick's Swan

Giant Swan

**Common Name:** Mute Swan  
**Scientific Name:** *Cygnus olor*

**Size:** 49-67 inches (125-170 cm); **Wingspan:** 79-94 inches (200-240 cm)

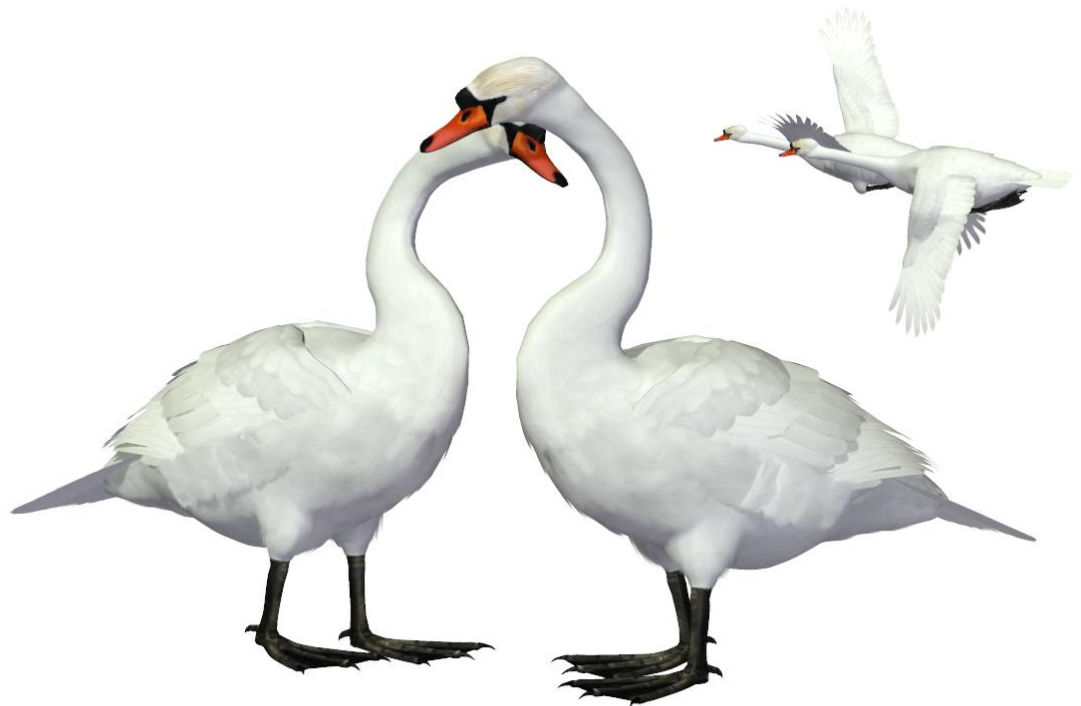
**Habitat:** Eurasia; endemic to much of Europe and Asia, and a rare winter visitor to the far north of Africa. It is also an introduced species in North America, Australasia and southern Africa.

**Status:** Least Concern. **Global population:** 600,000-610,000 individuals with an increasing population trend.

**Diet:** A wide range of vegetation, both submerged aquatic plants which they reach with their long necks, and by grazing on land. The food commonly includes agricultural crop plants such as rapeseed and wheat. Flocks in the winter may cause significant crop damage, often as much through trampling with their large webbed feet, as through direct consumption.

**Nesting:** Sexes are alike in appearance, although males are significantly larger. The Swan has completely white plumage with an

orange bill bordered with black. It is recognizable by its pronounced knob atop the bill which expands during breeding season. Young birds are not the bright white of mature adults, and their bill is dull greyish-black, not orange, for the first year. The down may range from pure white to grey to buff, with grey/buff the most common. The white cygnets have a leucistic gene. All Mute Swans are white at maturity, though the feathers (particularly on the head and neck) are often stained orange-brown by iron and tannins in the water



Swans are monogamous. Once the adults are mated, they seek out their own territories. Ducks and gulls often live close to swan nests so they may take advantage of the swan's ability to reach deep water weeds, which are pulled to the surface when swans feed.

Mute Swans build nests of large mounds of waterside vegetation that is located in shallow water on islands either in the middle or at the very edge of lakes. They often reuse the same nest each year, restoring or rebuilding it as needed. Male and female swans share the care of the nest, and once the cygnets are fledged it is not uncommon to see whole families looking for food together. Mute Swans are usually strongly territorial with just a single pair on smaller lakes, though in a few locations where a large area of suitable feeding habitat is found they can be colonial with the largest colonies having over 100 pairs.

Mute Swans can be very aggressive in defense of their nests. Most defensive attacks from a Mute Swan begin with a loud hiss, if this is not sufficient to drive off the predator, it is followed by a physical attack. Swans attack by smashing at their enemy with bony spurs in their wings, accompanied by biting with their large bill. The wings of the swan are also very powerful and exert enough force to break an adult man's leg.

**Cool Facts:** Mute Swans get their name from being the least vocal of the swan family. Mute Swans are one of the heaviest flying birds, with males averaging about 11–12 kg (24–26 lb) and the slightly smaller females weighing about 8.5–9 kg (19–20 lb).

The familiar pose with neck curved back and wings half raised, is known as “busking” and is a threat display. Both feet are paddled in unison during this display, resulting in more jerky movement.

In the “The Ugly Duckling” by Hans Christian Andersen, the “Duckling” is actually a mute swan cygnet is ostracized by his fellow barnyard fowl because of his homely looks. To his delight and to the surprise of others, he matures into a graceful swan, the most beautiful bird of all.

In the story of Lohengrin, the earliest written version of the legend by the German poet Wolfram von Eschenbach.(1210), Lohengrin was the son of Parsifal (the knight of the Holy Grail). At King Arthur's command, Lohengrin was taken by a swan-drawn boat to Antwerp, where he fought for a noble lady, Elsa of Brabant.

Richard Wagner turned this poem into the opera, “Lohengrin”, which in turn inspired Ludwig, the king of Bavaria, who built the swan castle, Neuschwanstein. Neuschwanstein later became the inspiration for the Disneyland theme park castle.

**Common Name:** Black Swan  
**Scientific Name:** *Cygnus atratus*

**Size:** 43-56 inches (110-142 cm); **Wingspan:** 63-79 inches (160-200 cm)

**Habitat:** Australia; south western and eastern Australia and adjacent coastal islands. In the southwest the range encompasses an area between North West Cape, Cape Leeuwin and Eucla; while in the east it covers a large region bounded by the Atherton Tableland, the Eyre Peninsula and Tasmania, with the Murray Darling Basin supporting very large populations of Black Swans. It is uncommon in central and northern Australia. It was hunted to extinction in New Zealand, but was reintroduced in 1864 as an ornamental species.

Their habitat extends across fresh, brackish and salt water lakes, swamps and rivers with underwater and emergent vegetation for food and nesting materials. Permanent wetlands are preferred, including ornamental lakes, but Black Swans can also be found in flooded pastures and tidal mudflats, and occasionally on the open sea near islands or the shore.

**Status:** Least Concern. **Global population:** Unknown amount of adult individuals. The population trend appears stable. The Black Swan is protected in New South Wales, Australia under the "National Parks and Wildlife Act 1974 (s.5)".



**Diet:** Submerged and emergent aquatic vegetation as well as grasses and grains. They often "tip up" to reach submerged aquatic vegetation and "dabble" on the water surface.

Occasionally they will graze on land, but they are clumsy walkers.

**Nesting:** Sexes are alike with the male being slightly larger than the female. Black Swans are mostly black-feathered birds, with white flight feathers.



The bill is bright red, with a pale bar and tip; and legs and feet are greyish-black. Males have a longer and straighter bill than females. Cygnets are a greyish-brown with pale-edged feathers.

The Black Swan is largely monogamous, pairing for life with a 6% divorce rate. Black Swans nest in the wetter winter months (February to September). Black Swans nest in isolated pairs or small colonies in shallow wetlands.

The nest is essentially a large heap or mound of reeds, grasses and weeds built in shallow water or on islands. It measures between 1 and 1.5 meters (3-4½ feet) in diameter and up to 1 meter high. The nest is reused every year, restored or rebuilt as needed. Both parents share the care of the nest. A typical clutch contains 4 to 8 greenish-white eggs that are incubated for about 35–40 days. Incubation begins after the laying of the last egg, in order to synchronize the hatching of the chicks.

Prior to the commencement of incubation the parent will sit over the eggs without actually warming them. Both sexes incubate the eggs, with the female incubating at night. The change over between incubation periods is marked by ritualized displays by both sexes. If eggs accidentally roll out of the nest both sexes will retrieve the egg using the neck (in other swan species only the female performs this feat). After hatching, the cygnets are tended by the parents for about 9 months until fledging.

**Cool Facts:** While Black Swans were once thought to be sedentary, the species is now known to be highly nomadic. There is no set migratory pattern, but rather opportunistic responses to either rainfall or drought. In high rainfall years, emigration occurs from the southwest and southeast into the interior, with a reverse migration to these heartlands in drier years. When rain does fall in the arid central regions, Black Swans will migrate to these areas to nest and raise their young. However, should dry conditions return before the young have been raised, the adult birds will abandon the nests and their eggs or cygnets and return to wetter areas.

Recent studies have shown that around a third of all broods exhibit extra-pair paternity. An estimated one-quarter of all pairings are homosexual, mostly between males. They steal nests, or form temporary threesomes with females to obtain eggs, driving away the female after she lays the eggs.

The Black Swan was a literary or artistic image, even before the discovery of *Cygnus atratus*. Cultural reference has been based on symbolic contrast and as a distinctive motif.

The Black Swan's role in Australian heraldry and culture extends to the first founding of the colonies in the eighteenth century. It has often been equated with antipodean identity, the contrast to the white swan of the northern hemisphere indicating 'Australianness'. The Black Swan is featured on the flag, and is both the state and bird emblem, of Western Australia; it also appears in the Coat of Arms and other iconography of the state's institutions.

**Common Name:** Black-necked Swan  
**Scientific Name:** *Cygnus melancoryphus*

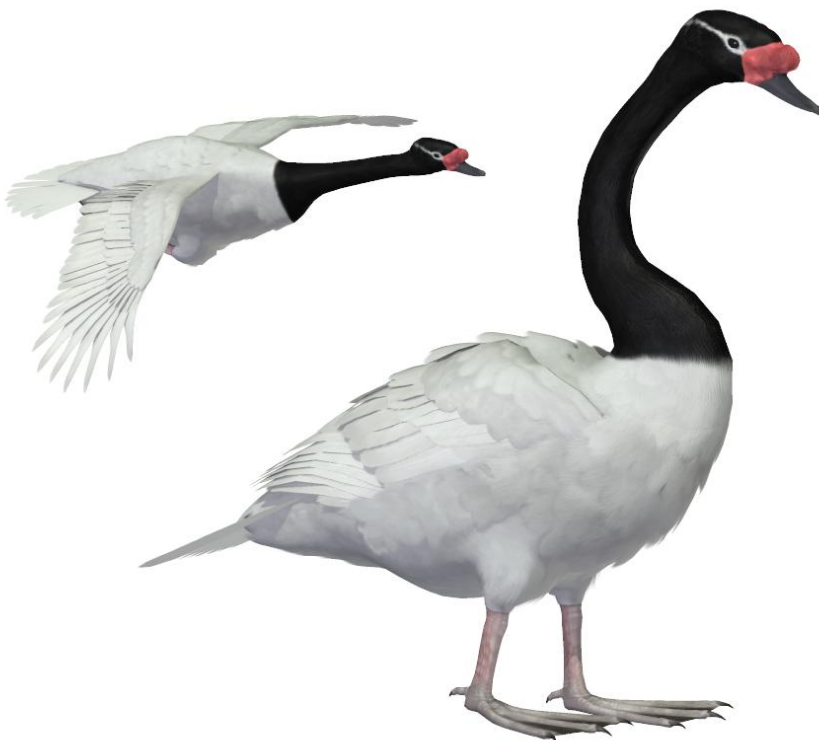
**Size:** 40-49 inches (102-124 cm); Wingspan: 53-70 inches (135-177 cm)

**Habitat:** South America; breeds in Chilean Southern Zone, Patagonia, Tierra del Fuego and on the Falkland Islands. In the austral winter, this species migrates northwards to Paraguay and southern Brazil.

Its preferred habitat is freshwater marshes, lagoon and lake shores.

**Status:** Least Concern. **Global population:** Unknown amount of adult individuals. The overall population trend is uncertain.

In 2004 and 2005, thousands of Black-necked Swans in the Carlos Anwandter Nature Sanctuary in Chile died or migrated away following major contamination by Valdivia Pulp Mill located on the Cruces River which feeds the wetlands. By August 2005, the birds in the Sanctuary had been decimated with only four birds remaining from the estimated population of 5,000 birds. Autopsies on dead swans attributed the deaths to high levels of iron and other metals polluting the water.



**Diet:** Submerged and emergent aquatic vegetation as well as insects and fish spawn.

**Nesting:** Sexes are alike with the male being larger. The body plumage is white with a black neck, head and greyish bill. It has a red knob near the base of the bill and white stripe behind eye. The cygnet has a light grey plumage with black bill and feet.

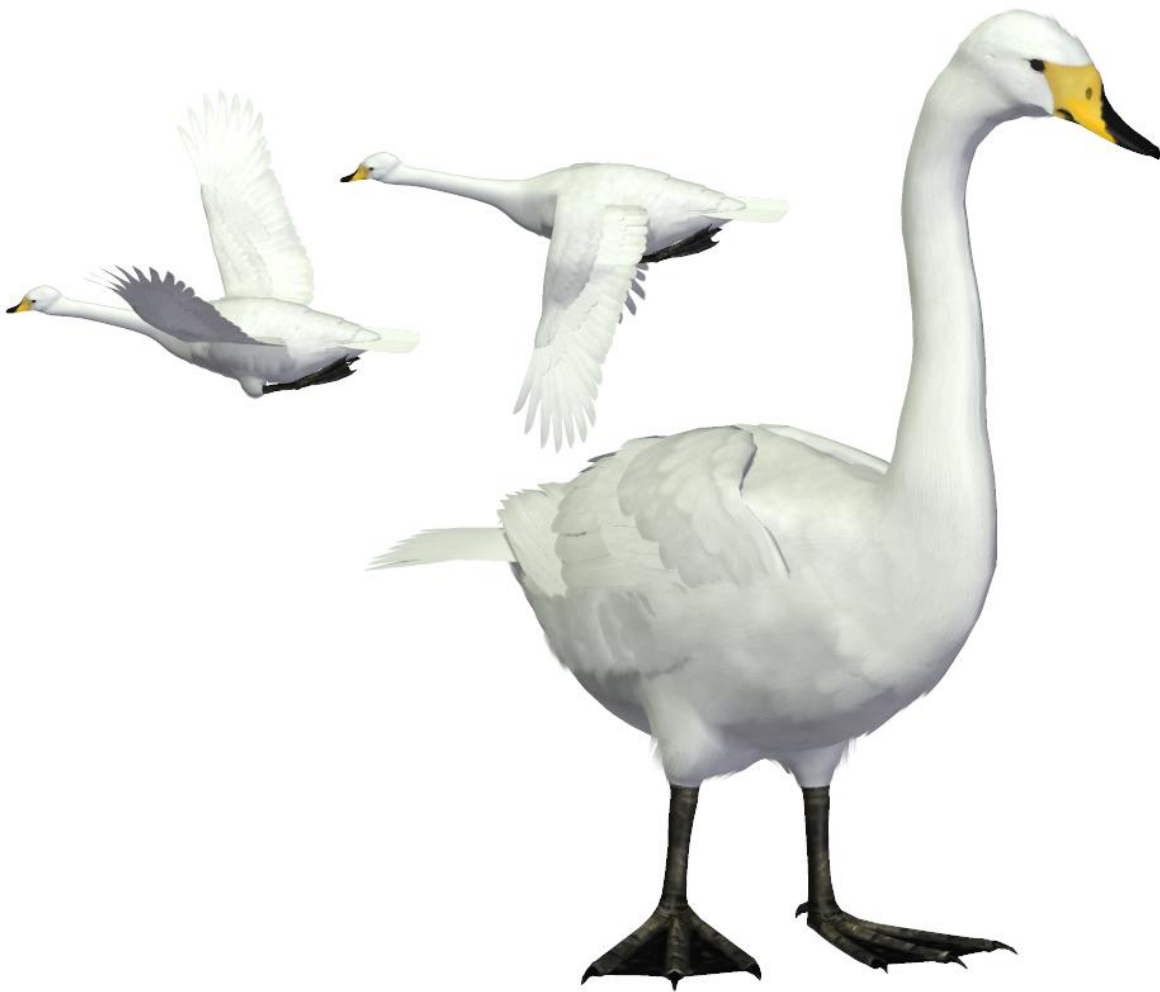
The female lays four to six eggs in a large nest constructed from vegetation in reedbeds, close to the water's edge, less preferably on land.

**Cool Facts:** The Black-necked swan is the smallest of the swans. Unlike most other waterfowl, both parents regularly carry the cygnets on their backs.

**Common Name:** Whooper Swan  
**Scientific Name:** *Cygnus cygnus*

**Size:** 55-65 inches (140-165 cm); **Wingspan:** 81-108 inches (205-275 cm)

**Habitat:** Eurasia; this species is predominantly migratory and travels over land making brief stop overs. It breeds from mid-May in solitary pairs with well-defined territories; non-breeders remaining in flocks separate from breeding pairs. Adults undergo a post-breeding molt period between late-July and early-August when they become flightless for 30 days, males starting to molt before the females. Non-breeding individuals molt at the same time as breeders, but while breeding pairs tend to molt in their breeding



territories, non-breeders molt in large congregations. After molting, the species begins to migrate south from late-September to October determined by weather conditions and arrives on the wintering grounds by October or November. The species departs for the breeding grounds again from March to April or early-May. Outside of the breeding season the species is highly sociable, migrating in small flocks or family groups (Madge

and Burn 1988) and congregating into flocks of up to 300-400 individuals in the winter. The species roosts on areas of open water adjacent to its feeding areas.

The Whooper Swan breeds on islands in or along the banks of shallow freshwater pools, lakes, slow-flowing rivers, marshes, swamps and bogs. They show a preference for habitats with abundant emergent vegetation and reed beds in coniferous forest zones, birch forest zones and shrub/forest tundra (generally avoiding open areas). Non-breeders may also be found in flocks along sheltered coasts on estuaries, lagoons and shallow bays during this season.

On migration, the species frequents lakes, estuaries and sheltered coasts. It traditionally winters on freshwater lakes and marshes, flood plains, brackish lagoons and coastal bays, although low-lying coastal agricultural land and wet pastures are now used increasingly.

**Status:** Least Concern. **Global population:** 180,000 adult individuals. The overall population trend is uncertain, as some populations are decreasing, while others are increasing, stable or have unknown trends.

The species is threatened by habitat degradation and loss (such as the reclamation of coastal and inland wetlands) especially in the Asian part of its breeding. Threats to its habitats include agricultural expansion, wetland drainage for irrigation, overgrazing by livestock (e.g. sheep), vegetation cutting for winter livestock feed, the development of roads, mining (e.g. strip mining of sediment), hydroelectric dam construction, disturbance from tourism and chronic oil pollution from oil exploration, exploitation and transportation.

It is listed under the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA).

**Diet:** Herbivorous; its diet consisting of the leaves, stems and roots of aquatic plants such as algae and *Zostera*, *Ruppia* and *Potamogeton spp.*, grasses, sedges and horsetails (*Equisetum spp.*). During the winter the species also takes agricultural grain, vegetables such as potatoes and turnips and acorns. On the breeding grounds, young birds often take adult and larval insects. Adults may also supplement their diet with marine and freshwater mussels.

The whooper swan spends much of its time swimming, straining the water for food, or eating plants that grow on the bottom. This species has upright posture and generally swims with a straight neck.

**Nesting:** Sexes are alike. The Whooper Swan is similar in appearance to the Bewick's Swan, but larger. It has a more angular head shape and a more variable bill pattern that always shows more yellow than black (Bewick's Swans have more black than yellow).

Whooper Swans pair for life, and their cygnets stay with them all winter; they are sometimes joined by offspring from previous years. Their preferred breeding habitat is wetland, but semi-domesticated birds will build a nest anywhere close to water. The pair helps equally in building the nest. The female will usually lay 4–7 eggs and the male will stand guard over the nest while the female incubates. The cygnets hatch after about 36 days and have a grey or brown plumage. The cygnets can fly at an age of 120 to 150 days.

**Cool Facts:** Its common name refers to the loud 'whooping' calls that it produces. Whooper Swans require large areas of water to live in, especially when they are still growing, because their body weight cannot be supported by their legs for extended periods of time.

The musical call made by Whooper Swans at the moment of death is believed to be the origin of the “swan song” phrase.

The Whooper Swan is the national bird of Finland and is featured on the Finnish 1 euro coin.



**Common Name:** Trumpeter Swan  
**Scientific Name:** *Cygnus buccinator*

**Size:** 54-65 inches (138-165 cm); **Wingspan:** 73-98 inches (185-250 cm)

**Habitat:** North America; northwestern and central North America, with the largest numbers of breeding pairs found in Alaska. Flying in V-shaped flocks, natural populations of these swans migrate to and from the Pacific coast and portions of the United States. In the winter, they migrate to the southern tier of Canada and in the United States to the eastern part of the northwest states, especially to the Red Rock Lakes area of Montana and the north Puget Sound region of northwest Washington State. However, released populations are mostly non-migratory.



Trumpeters breed in freshwater marshes and along ponds and lakes and winter in lakes, streams, springs, rivers, and reservoirs.

**Status:** Least Concern. **Global population:** Unknown amount of Adult individuals. The overall population trend is increasing. It was hunted for its feathers and skins throughout the 1600s - 1800s, causing a tremendous decline in its numbers. Its largest flight feathers made what were considered to be the best quality quill pens. By the early 20th century it was reduced to near extinction.

**Diet:** Submerged and emergent aquatic vegetation as well as grasses and grains. They often “tip up” to reach submerged aquatic vegetation and “dabble” on the water surface.

Trumpeter Swans tend to keep their necks straight (not curved) and upright when standing or in the water.

**Nesting:** Sexes are alike. The adult Trumpeter Swan is all white in plumage. The Trumpeter Swan has a large, wedge-shaped black bill that can, in some cases, be minimally lined with salmon-pink coloration around the mouth. The bill, measuring 10.5–12 cm (4.1–4.7 in) is the largest of any waterfowl. The legs are gray-pink in color, though in some birds they can appear yellowish gray to even black. The cygnets (juveniles) are grey in appearance, becoming white after the first year. This species can be confused with the Tundra Swan. Key distinctions include the Trumpeter Swan being significantly larger, having a longer neck and not having the yellow lores on the bill (around the mouth area).

Trumpeter Swans form pair bonds when they are three or four years old. The pair stays together throughout the year, moving together in migratory populations. Trumpeters are assumed to mate for life, but some individuals do switch mates over their lifetimes. Some males that lost their mates did not mate again.

Nests are large open bowls, made of aquatic vegetation, grasses, and sedges, lined with down and some body feathers. They are usually placed on slightly elevated sites surrounded by water, such as a muskrat mound, beaver lodge, or small island. One to nine creamy white eggs are laid. Young Trumpeter Swans may have as little as 40% chance of survival, due variously to disturbance and destruction by humans, predation, nest flooding and starvation. Predators of Trumpeter Swan eggs include Common Raven (*Corvus corax*), Common Raccoon (*Procyon lotor*), Wolverine (*Gulo gulo*), American Black Bear (*Ursus americanus*), Brown Bear (*Ursus arctos*), Coyote (*Canis latrans*), Gray Wolf (*Canis lupus*) and Northern River Otter (*Lontra canadensis*).

**Cool Facts:** The Trumpeter Swan is the largest extant species of waterfowl and gets its' name from its trumpet-like call.

Wild Trumpeter Swans have been known to live longer than 24 years, and one captive individual lived to be 32.

**Common Name:** Tundra or Whistling Swan  
**Scientific Name:** *Cygnus columbianus columbianus*

**Size:** 47-59 inches (120-150 cm); **Wingspan:** 67 inches (170 cm)

**Habitat:** North America; they breed in the coastal plains of Alaska and Canada, leaving for winter quarters about October. They arrive in winter quarters by November or December. Birds breeding in western Alaska winter along the Pacific coast from southern Alaska to California; they often move inland – particularly to the rich feeding grounds in the Californian Central Valley – and some cross the Rocky Mountains again and winter as far east as Utah and south to Texas and northern Mexico. The birds

breeding along the Arctic Ocean coast migrate via Canada and the Great Lakes region to winter at the Atlantic coast of the USA, mainly from Maryland to South Carolina, but some move as far south as Florida.



Whistling Swans start leaving for the breeding grounds again by mid-March, and arrive by late May. Vagrants have been recorded on the Bermudas, Cuba the Hawaiian Islands, Puerto Rico, and in England, Ireland, Japan, northeastern Siberia and Sweden.

The species breeds near shallow pools, lakes and broad slow-flowing rivers with emergent littoral vegetation and pondweeds connected to coastal delta areas in open, moist, low-lying sedge-grass or moss-lichen Arctic tundra. It rarely

nests in shrub tundra, and generally avoids forested areas. On migration, the species frequents shallow ponds, lowland and upland lakes, riverine marshes, shallow saline lagoons and sheltered coastal bays and estuaries. During the winter, it inhabits brackish and freshwater marshes, rivers, lakes, ponds and shallow tidal estuarine with adjacent grasslands, flooded pastures or agricultural arable fields.

**Status:** Least Concern. **Global population:** 170,000 adult individuals. Its numbers seem to be slowly declining in the west of its range since the late 19th century, coincident with the expansion of human settlement and habitat conversion in the birds' wintering areas; the eastern Whistling Swan populations on the other hand seem to be

increasing somewhat, and altogether its numbers seem to have slightly risen in the late 20th century.

**Diet:** Submerged and emergent aquatic vegetation as well as grasses and grains. They often “tip up” to reach submerged aquatic vegetation and “dabble” on the water surface.

**Nesting:** Sexes are alike. Pens (females) are slightly smaller than cobs (males). In adult birds, the plumage is entirely white, with black feet, and a bill that is mostly black, with a thin salmon-pink streak running along the mouth line and some yellow in the proximal part. The iris is dark brown. Swans that frequent waters that contains large amounts of iron ions such as bog lakes, acquire a golden or rusty hue on their heads and necks.

Immatures are white mixed with some dull grey feathering, mainly on the head and upper neck, which are often entirely light grey; their first-summer plumage is quite white already, and in their second winter they molt into the adult plumage. Their bills are black with a large dirty-pink patch taking up most of the proximal half and often black nostrils, and their feet are dark grey with a pinkish hue. Downy young are silvery grey above and white below.

The Tundra Swans mate in the late spring, usually after they have returned to the nesting grounds; as usual for swans, they pair monogamously until one partner dies. Should one partner die long before the other, the surviving bird often will not mate again for some years, or even for its entire life.

The nesting season starts at the end of May. The pair builds the large mound-shaped nest from plant material at an elevated site near open water, and defends a large territory around it. The female lays and incubates a clutch of 3–5 eggs. The male keeps a steady lookout for potential predators. When either of them spots a threat, they give a warning sound to let their partner know that danger is approaching. Sometimes the male will use his wings to run faster and appear larger in order to scare away a predator.

The time from laying to hatching is 30–32 days. Since they nest in cold regions, Tundra Swan cygnets grow faster than those of swans breeding in warmer climates; those of the Whistling Swan take about 60–75 days to fledge. The fledglings stay with their parents for the first winter migration. The family is sometimes even joined by their offspring from previous breeding seasons while on the wintering grounds; Tundra Swans do not reach sexual maturity until 3 or 4 years of age.

**Cool Facts:** There are two species of the Tundra Swan, the Bewick’s Swan and the Whistling Swan. *C. c. columbianus* is distinguished from *C. c. bewickii* by its larger size and the mostly black bill, with just a small and usually hard to see yellow spot of variable size at the base.

**Common Name:** Bewick's Swan

**Scientific Name:** *Cygnus columbianus bewickii*

**Size:** 45-55 inches (115-140 cm); **Wingspan:** 62 inches (160 cm)

**Habitat:** Eurasia; breeding range extends across the coastal lowlands of Siberia, from the Kola Peninsula east to the Pacific. They start to arrive on the breeding grounds around mid-May, and leave for winter quarters around the end of September. The populations west of the Taimyr Peninsula migrate via the White Sea, Baltic Sea and the Elbe estuary to winter in Denmark, the Netherlands and the British Isles. They are common in winter in the wildfowl nature reserves of the Royal Society for the Protection of Birds and of the Wildfowl and Wetlands Trust. Some birds also winter elsewhere on the southern shores of the North Sea. Swans breeding in eastern Russia migrate via Mongolia and northern China to winter in the coastal regions of Korea, Japan, and southern China, south to Guangdong and occasionally as far as Taiwan. A few birds from the central Siberian range also winter in Iran at the south of the Caspian Sea; in former times these flocks also migrated to the Aral Sea before the late 20th century

ecological catastrophe turned most of the habitat there into inhospitable wasteland.



Arrival in winter quarters starts about mid-October, though most spend weeks or even months at favorite resting locations and will only arrive in winter quarters by November or even as late as January. The birds leave winter quarters to breed starting in mid-February. Vagrants may occur south of the main wintering

range in cold years and have been recorded from most European countries where the birds do not regularly winter, as well as Algeria, Iraq, Palestine, Libya, Nepal, NE Pakistan, and on the Marianas and Volcano Islands in the western Pacific. Vagrants on



the spring migration have been sighted on Bear Island, Iceland and Svalbard, and in Alaska, Oregon and Saskatchewan in North America.

The species breeds near shallow pools, lakes and broad slow-flowing rivers with emergent littoral vegetation and pondweeds connected to coastal delta areas in open, moist, low-lying sedge-grass or moss-lichen Arctic tundra. It rarely nests in shrub tundra, and generally avoids forested areas. On migration, the species frequents shallow ponds, lowland and upland lakes, riverine marshes, shallow saline lagoons and sheltered coastal bays and estuaries. During the winter, it inhabits brackish and freshwater marshes, rivers, lakes, ponds and shallow tidal estuarine with adjacent grasslands, flooded pastures or agricultural arable fields.

**Status:** Least Concern. **Global population:** 38,000 adult individuals. The European winter population was estimated at 16,000–17,000 about 1990, with about 20,000 birds wintering in East Asia. The Iranian wintering population is small – 1,000 birds or so at most. The species population is believed to be decreasing. The species is threatened by the degradation and loss of wetland habitats due to agricultural drainage, petroleum pollution, peat-extraction, changing wetland management practices, the burning and mowing of reeds and algae population). Its Arctic breeding habitat is also threatened by oil and gas exploration. The species is threatened by mortality from oil pollution (oil spills) in molting and pre-migrational staging areas, from collisions with power lines, and from lead poisoning as a result of lead shot and fishing weight ingestion during migration and on wintering grounds. The species suffers from poaching in north-west Europe, is hunted for sport in North America and is hunted considerably for subsistence throughout its range. The species is also susceptible to avian influenza, so may be threatened by future outbreaks of the disease.

**Diet:** Submerged and emergent aquatic vegetation as well as grasses and grains. They often “tip up” to reach submerged aquatic vegetation and “dabble” on the water surface.

**Nesting:** Sexes are alike. Pens (females) are slightly smaller than cobs (males). In adult birds, the plumage is entirely white, with black feet, and a bill that is mostly black, with a thin salmon-pink streak running along the mouth line and prominent yellow in the proximal part. The iris is dark brown. Swans that frequent waters that contains large amounts of iron ions such as bog lakes, acquire a golden or rusty hue on their heads and necks.

Immatures are white mixed with some dull grey feathering, mainly on the head and upper neck, which are often entirely light grey; their first-summer plumage is quite white already, and in their second winter they molt into the adult plumage. Their bills are black with a large dirty-pink patch taking up most of the proximal half and often black nostrils, and their feet are dark grey with a pinkish hue. Downy young are silvery grey above and white below.

The Bewick's Swans mate in the late spring, usually after they have returned to the nesting grounds; as usual for swans, they pair monogamously until one partner dies.

Should one partner die long before the other, the surviving bird often will not mate again for some years, or even for its entire life.

The nesting season starts at the end of May. The pair builds the large mound-shaped nest from plant material at an elevated site near open water, and defends a large territory around it. The female lays and incubates a clutch of 3–5 eggs. The male keeps a steady lookout for potential predators. When either of them spots a threat, they give a warning sound to let their partner know that danger is approaching. Sometimes the male will use his wings to run faster and appear larger in order to scare away a predator.

The time from laying to hatching is 29–30 days. Since they nest in cold regions, Bewick's Swan cygnets grow faster than those of swans breeding in warmer climates; the juvenile Bewick's Swan fledge 40–45 days after hatching, while those of the Whistling Swan take about 60–75 days to fledge. The fledglings stay with their parents for the first winter migration. The family is sometimes even joined by their offspring from previous breeding seasons while on the wintering grounds; Tundra Swans do not reach sexual maturity until 3 or 4 years of age.

**Cool Facts:** Bewick's Swans are considered a subspecies of Tundra Swans. Bewick's Swans are smaller than the Tundra Swan and have more black than yellow on their bills than the Whooper Swan (which resembles the Bewick's Swan).

The bill pattern for every individual Bewick's Swan is unique, and scientists often make detailed drawings of each bill and assign names to the swans to assist with studying these birds.

**Common Name:** Giant Swan  
**Scientific Name:** *Cygnus falconeri*

**Size:** 75-84 inches (190-210 cm); **Wingspan:** 110 inches (300 cm)

**Habitat:** Europe; Malta, Sicily and the Mediterranean Islands.

**Status:** **Extinct.** **Global population:** none. It became extinct before the increase in human activity in the region, so its disappearance is thought to have resulted from extreme climate fluctuations or the arrival of superior predators and competitors.

Climate fluctuations are believed to have created land bridges to isolated islands that allowed predators in to closed eco-systems. Like the dwarf elephant and other Mediterranean island endemics, it likely became isolated when the Mediterranean re-flooded about 5.3 million years ago.



**Diet:** Omnivorous diet consisting of waterweeds and other aquatic vegetation.

**Nesting:** Sexes were alike.

**Cool Facts:** Due to its tremendous size, it is believed to have been a flightless or semi-flightless species.

Existing fossils of the swan comprised the greater part of the

foot skeleton and the frontal part of the cranium. By comparison of the bones with those of living swans, it probably resembled a scaled-up Whooper Swan.

## *Special Thanks to...*

....my betatesters (Flinthawk, Rhonda, and Barbara)

...and Nerd3D (for his invaluable help in special Poser coding)

## *Species Accuracy and Reference Materials*

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

With the use of one generic model to create dozens of unique bird 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 birds 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 and adapted for use in DAZ's DAZ Studio.

### *Field Guide Sources:*

- **"The Sibley Guide to Birds"** by David Allen Sibley.
- **"Swans of the World: In Nature, History, Myth & Art"** by Alice L. Price
- **"Birds of Europe"** by Killian Mullarney, Lars Svensson, Dan Zetterstorm and Peter J. Grant.
- **"Birds of East Asia"** by Mark Brazil.

### *Internet Sources:*

- **Cornell Lab of Ornithology** (<http://www.birds.cornell.edu>)
- **Wikipedia** (<http://www.wikipedia.com>)
- **Birdlife International** (<http://www.birdlife.org>)

# Appendix

## Maps Used on the Swans in this Set

Duck Species	Main Map Diffuse	Main Map Specular and bump	Wing Map Diffuse	Wing Map Specular and Bump	Tail Map
Bewick's Swan	BewickSwan1.JPG	TundraSwan1_b.JPG	MuteSwan2.JPG	MuteSwan2_b.JPG	NSMDuck3.JPG
Black Swan	BlackSwan1.JPG	BlackSwan1_b.JPG	BlackSwan2.JPG	MuteSwan2_b.JPG	BWDuck3.JPG
Black-necked Swan	BNSwan1.JPG	BNSwan1_b.JPG	MuteSwan2.JPG	MuteSwan2_b.JPG	NSMDuck3.JPG
Giant Swan	GiantSwan1.JPG	TundraSwan1_b.JPG	MuteSwan2.JPG	MuteSwan2_b.JPG	NSMDuck3.JPG
Mute Swan - Female	MuteSwan1.JPG	MuteSwan1_b.JPG	MuteSwan2.JPG	MuteSwan2_b.JPG	NSMDuck3.JPG
Mute Swan - Male	MuteSwan1.JPG	MuteSwan1_b.JPG	MuteSwan2.JPG	MuteSwan2_b.JPG	NSMDuck3.JPG
Trumpeter Swan	TrumpetSwan1.JPG	TrumpetSwan1_b.JPG	MuteSwan2.JPG	MuteSwan2_b.JPG	NSMDuck3.JPG
Tundra Swan	TundraSwan 1.JPG	TundraSwan1_b.JPG	MuteSwan2.JPG	MuteSwan2_b.JPG	NSMDuck3.JPG
Whooper Swan	WhooperSwan1.JPG	TundraSwan1_b.JPG	MuteSwan2.JPG	MuteSwan2_b.JPG	NSMDuck3.JPG

## Poser Rendering with Ambient Occlusion Lighting

Because of the high use of specular maps and quirks in Poser rendering in the Waterfowl series, ambient occlusion lighting may produce unexpected results such as a seams, grid patterns and odd shadowing. Seams appear to show up on neck lines when rendered at a distance, but not when close-up. Grids sometimes appear on close-up renders but not at distances.

The Ambient Occlusion lighting does not appear to add to the realism in rendering of the waterfowl so it is suggested that it not be used, if these issues appear.



# Songbird ReMix Merchandise



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