

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

Songbird ReMix *Ostriches*

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Songbird ReMix *Ostriches*

Introduction

Songbird ReMix Ostriches brings to life all five species of Ostrich. This unique bird comes in two basic colors; Red-necks and Grey-necks. These flightless birds can run up to 40 miles/70 km per hour and can kill a lion with a single kick. From the extinct Arabian Ostrich of the deserts to the Southern Ostrich of the African Horn, Songbird ReMix Ostriches will definitely add virtual speed to your Runtime.

Overview and Use

Select **Figures** in the Runtime Folder and go to the **Songbird ReMix** folder. Here you'll find the **Bird Base models**. Let's look at what they are and how you use them:

- **Bird Base Models**
 - **<O>** **“Ostrich” Base Model** - This model is used specifically for Ostriches in the Songbird Remix Series. Only Ostrich MAT/MOR files will use this model. Load this model first.

As Easy as 1-2-3...

The Ostrich wing settings come in 4 different modes. The “WingFolds” dial can be found in the “BODY”, “Left Wing” and “Right Wing” body part sections. The dial gives 3 wing shapes. A dial setting of...

- 0 = leaves the wings in the default pose. This setting is good for showing Ostrich aggression and mating display.
- 1 = wings are partially folded.
- 2 = wings are completely folded.
- 3 = wings are completely folded and drooped. This is the most common “look” for Ostriches.


It is possible to use in-between wing fold settings although some settings will result in some minor poke-through due to the morph transitions.

Other Morph Use... Additional wing bend morphs have been included in “Left Wing” and “Right Wing” body part sections. These morphs are **not** meant to be mixed with other morphs and are included to simply allow more options with the wings open.

ThroatSac Morph... This morph is found in the “Head” section and is used when illustrate swallow and drinking behavior. This morph can be mixed with the Bk-OpenClose to a point.

ThroatFix Morph... In rare instances, a combination of x-y-z rotations and morph mixing may make part of the inner throat poke through the cheeks. This morph corrects that.



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

Creating a Songbird ReMix Bird with Poser

Here's a step by step to create a bird in POSER:

1. Choose what you want to load. For this example, we'll create an "Arabian Ostrich".
2. Load Poser and select **FIGURES** and the Songbird ReMix folder. Because the "Arabian Ostrich" uses the Ostrich Songbird ReMix base model we'll load that.
3. Go to the **POSES** folder and select the Ostrich Songbird Remix library. In this case, we'll select the "Arabian Ostrich" pose and apply it to our loaded Songbird ReMix base model. This pose contains morph and texture settings to turn the generic model into an "Arabian Ostrich".

Creating a Songbird ReMix Bird with Studio

Here's a step by step to create a bird in DAZ Studio:

1. Choose what you want to load. For this example, we'll create an "Arabian Ostrich".
2. Load DAZ Studio and in "Poser Formats" **Runtime** Folder, select **FIGURES** and the Songbird ReMix folder. Because the "Arabian Ostrich" uses the Ostrich Songbird ReMix base model we'll load that.
3. Now, select the "Poser Formats" folder and go to the **Poses : Songbird ReMix : 36 Ostriches** folder and select the appropriate Songbird Remix library. In this case, we'll select the "Arabian Ostrich" pose and apply it to our loaded Songbird ReMix base model. This pose contains morph and texture settings to turn the generic model into an "Arabian Ostrich".

For more troubleshooting, visit the [Songbird ReMix FAQ](#)

Songbird ReMix *Ostriches*

Field Guide

Ostriches

North African or Common Ostrich

Southern African Ostrich

Masai Ostrich

Somali Ostrich

Arabian or Middle Eastern Ostrich

General Characteristics of Ostriches

Of all the living bird species on the planet, the ostrich is the largest. These huge birds sometimes reach a height of 2.6 m (8.5 ft.) and a weight of 135 kg (300 lb.), although they are more usually about 2 m (8 ft.) tall and about 100 kg (230 lb.). Unlike most birds, ostriches do not possess keeled sternums (breastbones).

Ostrich are equipped with many advantageous features including excellent eye sight, large external ear canals, and powerful legs. While ostriches cannot fly, they are very fast, running up to 70 km/hr (40 mph). This allows them to outpace most pursuers, such as lions, leopards, and hyenas. Their small, flat heads and long necks are almost bare and the rest of their body is covered with longer feathers. The plumage of adult males is glossy black, and the wings and tail feathers are white. The females and young males are dark grey to grey-brown. A flock is usually made of one male and two to six females. During breeding seasons, the beaks of the ostrich will change color. Males will have bright red beaks, shins and sometimes necks. Females will have a silver, grayish colored beak and shins during breeding season. The color of the neck is dependent on the presence of the male hormone testosterone. The color of the feathers is dependent on the presence or absence of the female hormone estrogen. Thus, castrated males will have normal feather color but not the skin color and immature or spayed females will have black feathers.

Ostrich may become sexually mature at two years of age although males often mature later than females. It is not uncommon for hens to begin laying at two to 3 years of age while males may take as long as 4 to 5 years to be functionally mature.

Each female lays two to five eggs in the communal nest. Consequently, the clutch will range from 12 to 16 eggs. Each egg will weigh about 1.5 kg (3 lb.). The nest is simply a cavity scooped from the ground. Female and male ostriches alternate sitting on their eggs. The females sit on the eggs in the heat of the day while the males sit on the eggs at night. The females are able to stay cooler in the hot sun because of their lighter colored feathers. A female ostrich shows a remarkable ability to recognize her own eggs even when mixed in with those of other females in their communal nest.

In captivity, females may lay as many as 100 eggs in a season, although 20 to 40 are more common. Eggs are generally laid every other day. Eggs are typically laid in late afternoon. Although mating may occur numerous times during the day, it is believed that a single mating may be effective for up to a week.

If threatened while sitting on the nest, the hen will press her long neck flat along the ground, blending with the background. Ostriches are so powerful that a single kick at a predator, such as a lion, could be fatal.

Contrary to popular belief, ostriches do not bury their heads in the sand-- that familiar pose is actually an ostrich looking for moisture beneath the soil. This myth likely began with the Roman naturalist, Pliny the Elder (AD 23–79), who wrote that Ostriches "imagine, when they have thrust their head and neck into a bush, that the whole of their body is concealed".

In the wild, they are found in drier and sandy regions of Africa, and are very well adapted to desert life, absorbing water from the plants they eat.

Humans have had a close relationship with ostrich for thousands of years. Ancient Egyptians farmed ostrich and present day farming, which began in 1833, is run much the same way. Ostrich feathers have been used for adornment by humans for at least 5000 years and the eggs are still used by Bushmen as jewelry and receptacles for carrying water. Extensive hunting for feathers, meat, and skin, coupled with overgrazing by domestic animals on their habitat has led to the extinction of the ostrich from the Middle East.

Although they are not globally threatened, the 4 remaining subspecies of ostrich require strict protection and farming has helped to conserve the wild populations. Ostriches can live approximately 40 years in managed situations. In the wild their life span is unknown.

Common Name: Common or North African Ostrich
Scientific Name: *Struthio camelus camelus*

Size: 96-108 inches (2.5-2.74 m)

Habitat: Africa; Mauritania, Mali, Niger, Chad, Sudan, Ethiopia, Eritrea, Somalia, Kenya, Uganda, Tanzania, Angola, Namibia, South Africa, Botswana, Zambia, Zimbabwe and Mozambique.

Found on the savannas and semi-deserts of Africa: in the open dry grasslands of East Africa, South Africa, and in the Sahara and adjacent Sahel area.

Status: Least Concern to Critically Endangered. **Global population:** Unknown. Historically it was the most widespread subspecies, ranging from Ethiopia and

Sudan in the east, throughout the Sahel to Senegal and Mauritania in the west, to Egypt and southern Morocco in the north. It has now disappeared from large parts of this range, and it only remains in 6 of the 18 countries where it originally occurred, leading some to consider it critically endangered.

Diet: Their primary diet includes grasses, shrubs, seeds, roots, leaves and flowers. Occasionally they consume locusts and grasshoppers. They have also been known to eat small animals, such as lizards



and mice. Because they have no teeth, they swallow pebbles that help grind the swallowed foods within their gizzard.

Nesting: The neck is pinkish-red. While the plumage of males is black and white, that of females is dark grey.

Ostriches are polygamous. The male gathers around him a harem of three to five females, all of which lay their eggs in the same nest over a three week period. Ostrich mating and egg laying will occur shortly before the onset of the rainy season, so that when the chicks hatch there will be plenty of food to sustain them until they are several months old. The completed clutch is incubated by the male at night and the dominant female during the day.

Cool Facts: The Ostrich is the largest living bird, reaching a height of up to 8 feet. It has a long neck and legs, is flightless, and is capable of running at about 40 mph. It lives in the wild in Africa, and is farmed all over the world.

Ostriches live in groups of 5–50 animals that often travel together with other grazing animals such as zebras or antelopes. The ostrich is adapted to a type of life that depends on running to escape predators. It has evolved a cloven hoof consisting of only two toes. Ostriches are nomadic, wandering wherever food is most readily available. However, they never stray very far from water, of which they need a gallon-and-a-half a day. Their most important senses are their excellent eyesight and acute hearing, with which they can sense predators such as lions from far away.

The Ostrich is farmed around the world, particularly for its feathers, which are decorative and are also used as feather dusters. Its skin is used for leather products and its meat is marketed commercially.

Common Name: Southern Ostrich
Scientific Name: *Struthio camelus australis*

Size: 96 inches (2.5 m)

Habitat: Africa; south of the Zambezi and Cunene rivers.

Found in a diverse number of habitats from sand flats and grasslands, to open and dense thorn brush velds, to Mupane woodlands, as well as steep and rocky slopes.

Status: Least Concern. **Global population:** Unknown.

Diet: Grasses, shrubs, seeds, roots, leaves and flowers. Occasionally they consume locusts and grasshoppers. They have also been known to eat small animals, such as lizards and mice.

Nesting: The Southern Ostrich had blue-grey skin on the neck and legs. The males have black feathers, while the females and juveniles have dark grey to grey-brown feathers.

Ostriches are polygamous. The male gathers around him a harem of three to five females, all of which lay their eggs in the same nest over a three week period. Ostrich mating and egg laying will occur shortly before the onset of the rainy season, so that when the chicks hatch there will be plenty of food to sustain them until they are several months old. The completed clutch is incubated by the male at night and the dominant female during the day.

Cool Facts: It was once farmed for its feathers in the Little Karoo area of Cape Province.



Common Name: Masai Ostrich

Scientific Name: *Struthio camelus massaicus*

Size: 96 inches (2.5 m)

Habitat: Africa; found in East Africa. Their range is essentially limited to southern Kenya, eastern Tanzania and Ethiopia, in addition to parts of Southern Somalia.

Status: Least concern. **Global population:** Unknown.

Diet: Grasses, shrubs, seeds, roots, leaves and flowers. Occasionally they consume locusts and grasshoppers. They have also been known to eat small animals, such as lizards and mice.

Nesting: Ostriches are polygamous. The male gathers around him a harem of three to five females, all of which lay their eggs in the same nest over a three week period. Ostrich mating and egg laying will occur shortly before the onset of the rainy season, so that when the chicks hatch there will be plenty of food to sustain them until they are several months old. The completed clutch is incubated by the male at night and the dominant female during the day.

Cool Facts: There is some range overlap between the Somali Ostrich and the Masai Ostrich. Ecologically they are differentiated by the Somali Ostrich preferring bushier, more thickly vegetated areas, where it feeds largely by browsing, whereas the Masai Ostrich is mainly a grazer on open savanna.



There are reports of interbreeding difficulties between the two taxa.

Common Name: Somali Ostrich

Scientific Name: *Struthio camelus molybdophanes*

Size: 96 inches (2.5 m)

Habitat: Africa; found in eastern Africa from north-eastern Ethiopia, across Somalia, to north-eastern Kenya, its range corresponding roughly to the area known as the Horn of Africa.

Somali ostriches prefer bushier, more thickly vegetated areas than other subspecies.



Status: Near Threatened. **Global population:**

Unknown. The wild Ostrich population has declined drastically in the last 200 years, with most surviving birds in reserves or on farms

Diet: Grasses, shrubs, seeds, roots, leaves and flowers. Occasionally they consume locusts and grasshoppers. They have also been known to eat small animals, such as lizards and mice.

Nesting: Though generally similar to other ostriches, the skin on the neck and thighs of the Somali Ostrich is grey-blue (rather than pinkish). During the mating season, the skin of

the male becomes bright blue. The neck lacks a typical broad white ring. The females are slightly larger than the males and browner in plumage than other female ostriches.

The Somali Ostrich differs from other ostrich subspecies in that they generally live in pairs or alone, rather than in flocks. Ostrich mating and egg laying will occur shortly before the onset of the rainy season, so that when the chicks hatch there will be plenty of food to sustain them until they are several months old. The completed clutch is incubated by the male at night and the dominant female during the day.

Cool Facts: Molecular evidence indicates that the East African Rift has served as a geographic barrier to isolate this taxon from the nominate subspecies, the North African Ostrich, *Struthio camelus camelus*. Ecological and behavioral differences have also kept it genetically distinct from the neighboring Masai Ostrich, *Struthio camelus massaicus*. An examination of the mitochondrial DNA of *Struthio* taxa, including the extinct Arabian Ostrich, *Struthio camelus syriacus*, has found that the Somali Ostrich is phylogenetically the most distinct, appearing to have diverged from their common ancestor some 3.6 to 4.1 million years ago.

There is some range overlap between the Somali Ostrich and the Masai Ostrich. Ecologically they are differentiated by the Somali Ostrich preferring bushier, more thickly vegetated areas, where it feeds largely by browsing, whereas the Masai Ostrich is mainly a grazer on open savanna.

There are reports of interbreeding difficulties between the two taxa.

Common Name: Arabian Ostrich
Scientific Name: *Struthio camelus syriacus*

Size: 70 inches (2 m)

Habitat: Asia; the Arabian Peninsula and in the Near East. Its range seems to have been continuous in prehistoric times, but with the drying-up of the Arabian



Peninsula, it disappeared from the inhospitable areas of the Arabian Desert such as the Rub'al-Khali. In historic times, the bird seems to have occurred in two discrete relict populations: a smaller one in the southeast of the Arabian Peninsula and a larger one in the area where today the borders of Saudi Arabia, Jordan, Iraq and Syria meet. Towards the Sinai Peninsula, it probably intergraded with the North African subspecies *camelus* in earlier times.

Status: Extinct (1966).
Global population: 0.

The widespread introduction of firearms and, later, motor vehicles marked the start of the decline towards extinction of this subspecies. Earlier, hunting with bow, arrows and dogs had allowed most animals of a group to escape, but rifles enabled the poachers to shoot down many individuals for the sheer fun of it.

By the early 20th century, the Arabian Ostrich had become rare. Its main stronghold was the northern Nefud, northwards to the Syrian Desert between latitudes 34°N and 25°N and longitude 38°E, eastwards to the Euphrates Valley. It was most plentiful in Al Jawf Province, where it associated with herds of the now extinct Saudi Gazelle and the very rare Arabian Oryx. Some of the last sightings of the Arabian Ostrich include an individual east of the Tall al-Rasatin at the Jordanian-Iraqi border in 1928, a bird shot and eaten by pipeline workers in the area of Jubail in the early 1940s (some sources specifically state 1941), two apocryphal records of birds suffering the same fate in 1948, and a dying individual found in the upper Wadi el-Hasa north of Petra in 1966.

Diet: Seeds, grasses, bushes and forage on trees. They mainly feed on seeds and other plant matter. Because they have no teeth, they swallow pebbles that help grind the swallowed foods within their gizzard.

Nesting: Females were of a slightly lighter coloration.

Ostriches are polygamous. The male gathered around him a harem of three to five females, all of which laid their eggs in the same nest over a three week period. Ostrich mating and egg laying occurred shortly before the onset of the rainy season, so that when the chicks hatched there would be plenty of food to sustain them until they were several months old. The completed clutch was incubated by the male at night and the dominant female during the day.

Cool Facts: The only certain way to distinguish the Common Ostrich from the Arabian Ostrich was the smaller size of the latter.

The Arabian Ostrich has long had a significant place in the culture of the region. An adult with 11 offspring is featured on the famous prehistoric "Graffiti Rock I" near Riyadh.

In Mesopotamia, it was used as a sacrificial animal and also featured in artwork, being painted on cups and other objects made from ostrich eggs, which were traded as far as Etruria during the Neo-Assyrian period.

In Tang China, an ostrich was a welcome exotic gift fit for an emperor: ostriches figure in the decoration of the Qianling Mausoleum, completed and closed in 706.

The Jewish view of this bird was less favorable. The fact that the female ostrich may leave the nest unattended (because the eggs are too thick-shelled to be easily broken open by predators) is the reason why the bird is contrasted with the parental instinct of the stork in the Book of Job (Job 39:13-18.) This is also the reason why the Book of Lamentations (Lamentations 4:3) refers to the female ostrich as heartless. The Arabian Ostrich is possibly among the birds forbidden to Jews as unclean under the kashrut in Leviticus (Leviticus 11:16), though the

Israelites would just as likely have known the birds from the North African subspecies which was extant in the Nile Valley of Egypt at that time.

In Roman times, there was a demand for ostriches to use in venatio games or cooking. These birds usually would have come from the North African subspecies, rather than from the Arabian one, as the latter was only found in the unruly frontier regions of the Roman Empire. It is to be noted however that much later, the plumes of the Arabian Ostrich were considered superior material for millinery compared to those of the North African subspecies.

After the rise of Islam, the Arabian Ostrich came to represent wealth and elegance. Ostrich hunting became a popular pastime for the rich and noble (if slaughtered properly, ostrich meat is halaal to Muslims). Eggs, feathers and leather were extensively used in handicrafts. Arabian Ostrich products, as well as live birds, were exported as far as China. A Tang Dynasty source states that the "camel bird" inhabiting Arabia is *"four chi and more in height, its feet resembling those of a camel; its neck is very strong, and men are able to ride on its back..."*.

The Arabian Ostrich was also discussed in Mesopotamian scholarly writings from the time of the Baghdad Caliphate, such as Zakariya al-Qazwini's cosmography 'Aja'ib al-makhluqat wa-ghara'ib al-mawjudat, the Kitab al-Hayawan ("Book of Animals") of Al-Jahiz, or Ibn al-Manzur's dictionary Lisan al-Arab.

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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:

- "Field Guide to the Birds of East Africa" by Terry Stevenson and John Fanshawe
- **Wikipedia** (<http://www.wikipedia.com>)
- **Birdlife International** (<http://www.birdlife.org>)
- **American Ostrich Association** (<http://www.ostriches.org>)

Other Resources:

- **Songbird ReMix Central** (<http://www.songbirdremix.com>)
- **Songbird ReMix on Facebook**
(<http://www.facebook.com/pages/Songbird-ReMix/208762869171101>)

**Shirts, jerseys, sweatshirts,
prints, cards, posters, pillows,
coffee cups, calendars & more**

