



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

Songbird ReMix Seabirds

Contents

Manual

Introduction	3
Overview and Use	3
Conforming Crest Quick Reference	4
Creating a Songbird ReMix Bird	5
Using Conforming Crests with Poser	6
Using Conforming Crests with DAZ Studio	8

Field Guide

List of Species	9
Albatrosses, Petrels and Shearwaters	
Black-footed Albatross	10
Cape Petrel	12
Southern Giant Petrel	13
Sooty Shearwater	15
Pelecaniformes	
Double-crested Cormorant	17
Blue-footed Booby	19
Jaegers and Skuas	
Arctic Skua or Parasitic Jaegar	21
Gulls, Terns and Skimmers	
Common or Mew Gull	22
Glaucous Gull	23
Herring Gull	24
Common Tern	26
White or "Fairy" Tern	27
Least Tern	28
Black Skimmer	30
Alcids	
Common Guillemot or Common Murre	31
Resources, Credits and Thanks	32
Rendering Tips for Poser and Vue	33

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Songbird ReMix Seabirds

Introduction

“Songbird ReMix Seabirds” explores many of the more common and unusual birds that are found at sea. This collection includes Gulls, Terns, Jaegers, Petrels, Shearwaters, Boobies and many more species found throughout the globe. From the most angelic White “Fairy” Tern found in the South Pacific to the hunter of Penguin, the Southern Giant Petrel to the Blue-footed Booby of the American coast, the birds from this package are a worthy centerpiece in any form of imagery.







Overview and Use

Select **Figures** in the Runtime folder then go to the folder that contains the **Songbird ReMix**. 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 included in this volume:**
 - **Songbird ReMix3 WF1 and WF1B Palmate Base** - All bird species that are long or medium-necked Palmates (3 toed web feet) use this model (Albatrosses).
 - **Songbird ReMix3 WF2 and WF2B Totipalmate Base** - All bird species that are long or medium-necked Totipalmates (4 toed web feet) use this model (Boobies, Cormorants, Gannets and Frigatebirds).
 - **Songbird ReMix3 WF3 Gull Base** - All bird species that are short-necked Palmates (3 toed web feet) use this model (Shearwaters, Skuas, Petrels, Gulls and Terns).
 - **Songbird ReMix3 Puffin Base** - All bird species that are in the Auk family use this model (Razorbills)
- **Conforming Parts** (All Conforming Crests have alphabetical Icons that are identified in the lower right corners, for example: “C1”, “C2” or “R”. In the Pose folder you will find corresponding alphabetical Icons. All MAT/MOR files with the same icon use that particular Conforming Part. 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” you must also set its counterpart in the head part of the Conforming Crest. So Now let's look at what's included in Conforming Parts:
 - **<C24> Conforming Crest24**. For use with the Double-crested Cormorant male's mating plumage.

Quick Reference Guide

When using Poser or when going the route of using DAZ Studio's "Create Your Own" Base Models, here's a chart to help you figure out what model goes with what character. Load the appropriate base model and apply the character settings.

Load Model(s)	To Create... (apply MAT/MOR files)
 <p>Waterfowl 1 Base Long-necked palmate</p> <p>Long-necked Palmate</p>	<ul style="list-style-type: none"> • Common Guillemot or Thin-billed Murre
 <p>Waterfowl 1 Base Medium-necked palmate</p> <p>Medium-necked Palmate</p>	<ul style="list-style-type: none"> • Black-footed Albatross • Cape Petrel • Southern Giant Petrel • Sooty Shearwater
 <p>Waterfowl 2 Base Long-necked Totipalmate</p> <p>Long-necked Totipalmate</p>	<ul style="list-style-type: none"> • Double-crested Cormorant
 <p>Conforming Crest 24 + Waterfowl 2 Base Long-necked Totipalmate</p> <p>Long-necked Totipalmate</p>	<ul style="list-style-type: none"> • Double-crested Cormorant (Male mating plumage)
 <p>Waterfowl 2 Base Medium-necked Totipalmate</p> <p>Medium-necked Totipalmate</p>	<ul style="list-style-type: none"> • Blue-footed Booby
 <p>Waterfowl 3 Base Short-necked</p> <p>Short-necked Palmate</p>	<ul style="list-style-type: none"> • Arctic Skua or Parasitic Jaegar • Common or Mew Gull • Glaucous Gull • Herring Gull • Common Tern • Fairy Tern • Least Tern • Black Skimmer

Creating a Songbird ReMix Bird

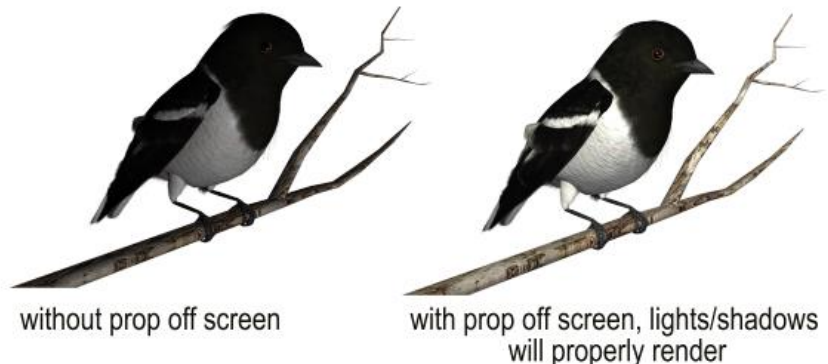
1. Choose what you want to load. For this example, we'll create a Gull species.
2. Load Poser or DAZ Studio and select **FIGURES** and the Songbird ReMix folder. DAZ Studio users will select the "Poser Formats" → "My Library" → "FIGURES" → "Songbird ReMix".
3. Because all of the Gulls use the "WF3" base 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 Gull 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 Gull. It will automatically apply the correct DAZ Studio material settings if you are using DAZ Studio.

Displacement in Poser 5+

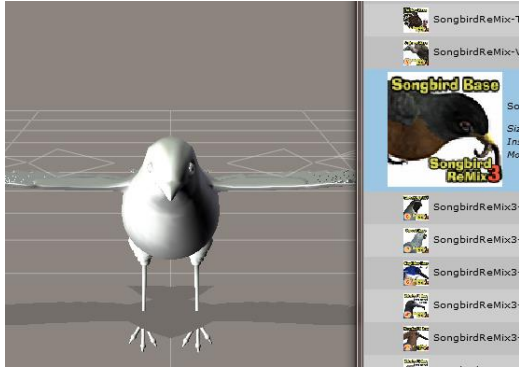
In Poser, several settings will help to bring out the best in this bird set. Under "Render Settings" (CTRL+Y) make sure you check "**Use Displacement Maps**" and (in some rare cases) the "**Remove Backfacing Polys**" boxes. In some poses, the wing morphs will expose backfacing polygons which tend to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

Scaling and Square Shadows in Poser

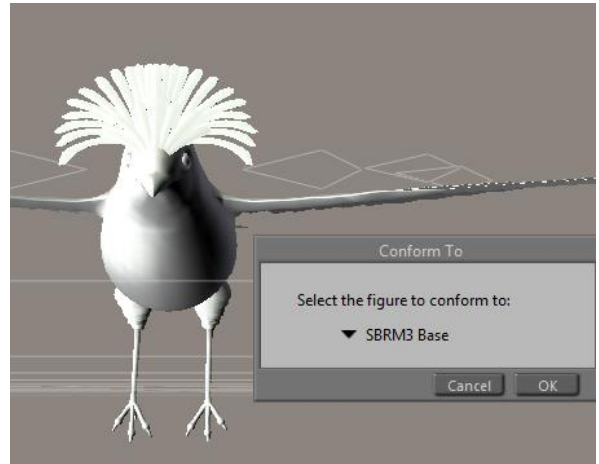
All the birds in this package have to scaled proportionally to DAZ 3D's Victoria and Michael models. The smallest of the included birds **MAY** render with a Square shadow or improper lighting. This is a bug in Poser. Poser can't figure out how to render a shadow for something really small, so it creates 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.



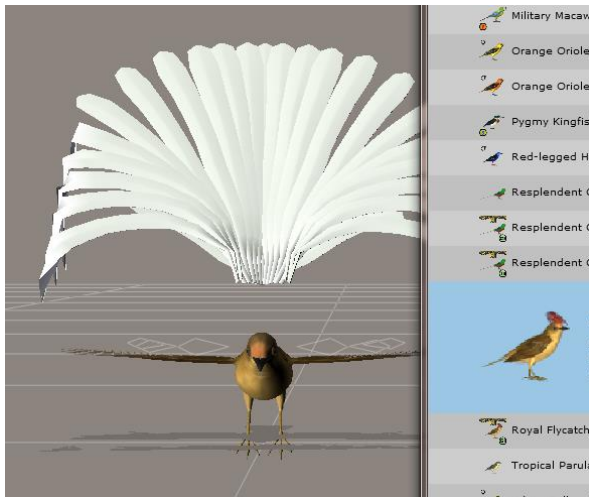
How to build a Songbird ReMix Character with a Conforming Crest in Poser



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.

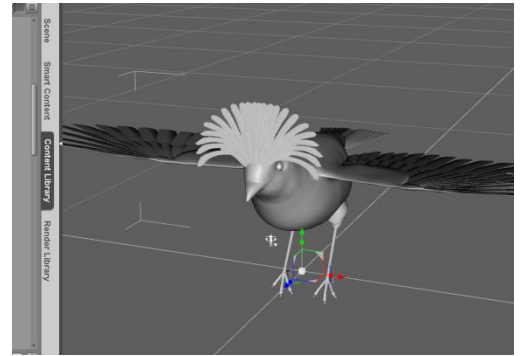
Songbirdremix.com always has the latest updates and additions to existing Songbird ReMix products (often months before they are updated at DAZ), plus the latest digital and real bird news, tutorials, videos, all the Field Guides, free bird characters, props and much more...

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

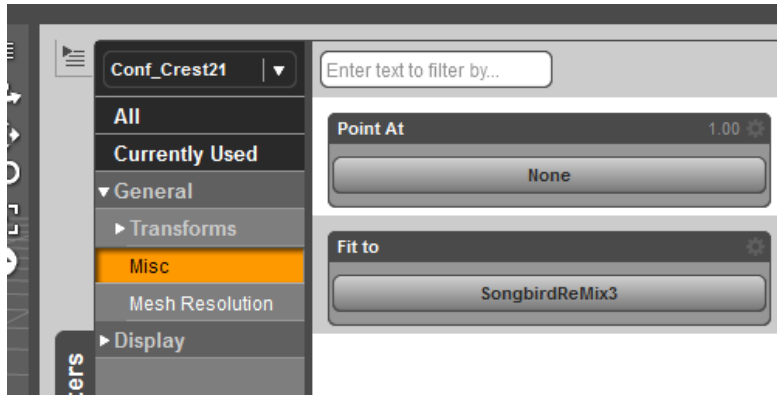


How to build a Songbird ReMix Character with a Conforming Part in DAZ Studio

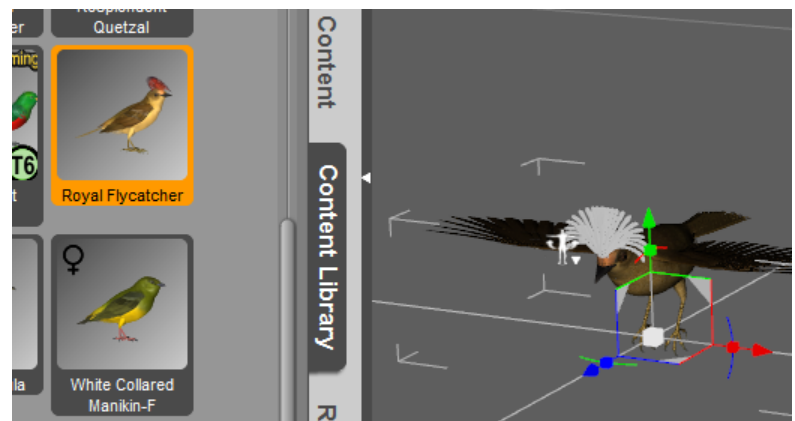
In the **Runtime** folder, select **Figures** and load the Songbird ReMix Model and the appropriate Conforming Crest in Studio. Select the Conforming Crest by selecting on the screen or in the **Scene** Tab. Now, using the "FIT TO" command in the Parameters Tab, Select the Songbird ReMix Model. Go back to the



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 Seabirds

Field Guide

Albatrosses, Petrels and Shearwaters

Black-footed Albatross
Cape Petrel
Southern Giant Petrel
Sooty Shearwater

Pelecaniformes

Double-crested Cormorant
Blue-footed Booby

Jaegers and Skuas

Arctic Skua

Gulls, Terns and Skimmers

Common or Mew Gull
Glaucous Gull
Herring Gull
Common Tern
Fairy Tern
Least Tern
Black Skimmer

Alcids

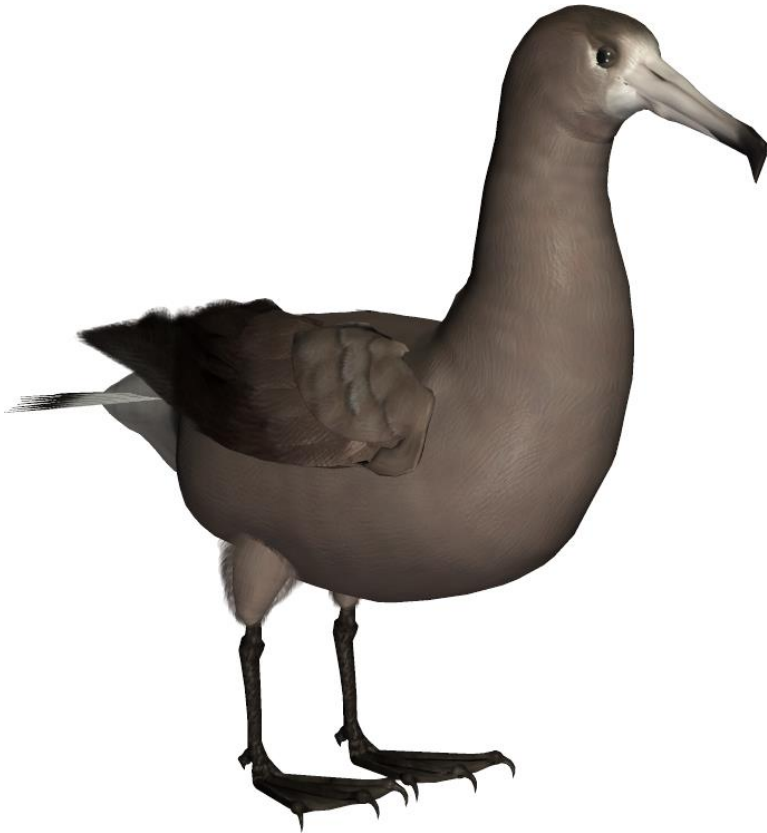
Common Guillemot

Common Name: Black-footed Albatross
Scientific Name: *Phoebastria nigripes*

Size: 32 inches (81 cm)

Habitat: Northern Pacific Hemisphere. They nest in colonies on isolated islands of the Northwestern Hawaiian Islands (Laysan and Midway), and the Japanese islands of Tori Shima, Bonin, and Senkaku. Found from Alaska to California and Japan

Status: **Endangered.** **Global Population:** 120,000 mature individuals. It is taken incidentally by long-line fishing. An estimated 4,000 to 8,000 are taken every year. It is also vulnerable to oil and ingestion of floating plastics, which reduces the space in the stomach available for food to be brought to the chick. All of its nesting sites in the U.S. are protected.



Diet: Fish, flying fish eggs, squid and to a lesser extent crustaceans.

Nesting: Albatrosses form long term pair-bonds that last for life. After fledging the birds return to the colony after three years, and spend two years building nests, dancing and being with prospective mates, a behavior that probably evolved to ensure maximum trust between the birds (raising an albatross chick is a massive energetic investment, and a long courting period establishes for both birds that the other is committed).

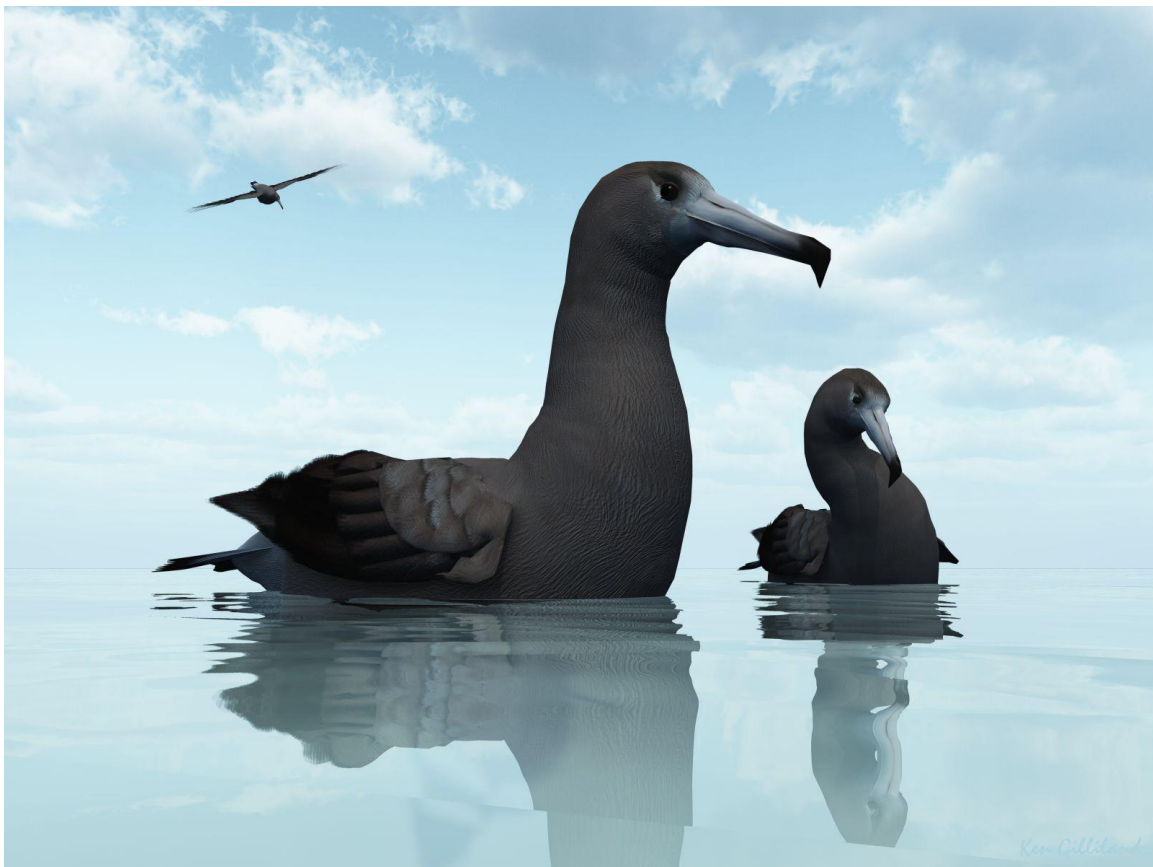
Nests are simple depressions scraped in the sand, into which one egg is laid. The egg is incubated for just over two months (65 days). Both birds incubate the egg, the male incubating more as the female

leaves soon after hatching to recoup reserves used for egg-laying. The average time spent on incubating shifts is 18 days. However, mates can wait up to 38 days to be relieved, and if something happens to the mate the other has been recorded incubating for 49 days without food or water.

The chick is brooded for 20 days by its parents, after which both parents leave the nest and return to feed the chick. The chick is fed regurgitated food by sticking its bill inside that of its parent. Fledging occurs after 140 days.

Cool Facts: The Black-footed Albatross is one of three Albatrosses found in the northern Hemisphere and is the only dark colored one. It has a keen sense of smell, which it uses to locate food across vast expanses of ocean. It will scare other predators away from its food by spreading its wings and screaming at it. It drinks seawater and excretes excess salt through glands above the eyes.

The Black-footed Albatross has a number of apparent adaptations to stay cool at hot, exposed nest sites. These include an extensive network of blood vessels in the head, as well as a habit of raising the feet off the ground.



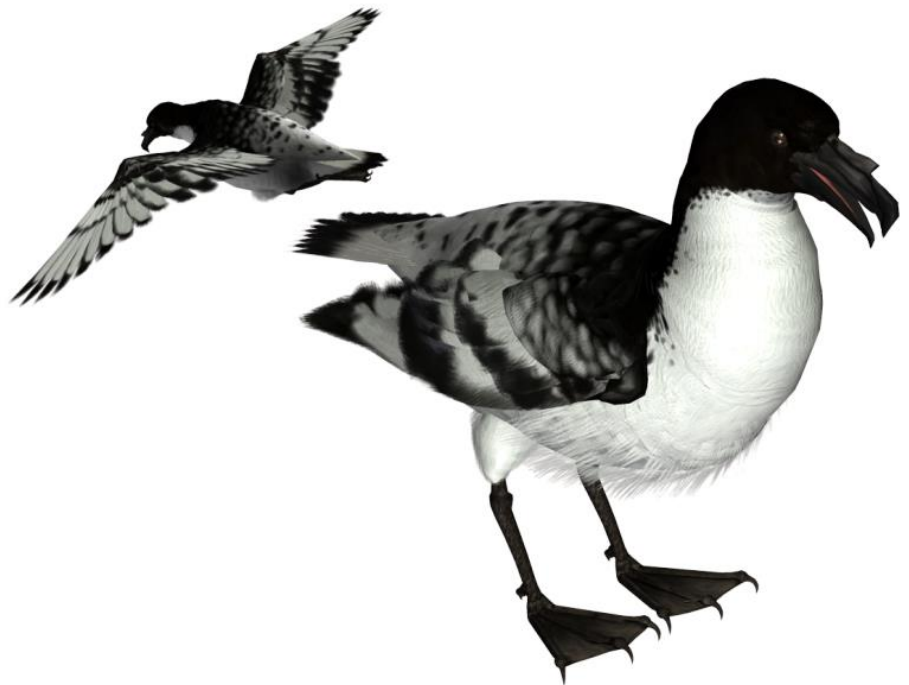
Common Name: Cape Petrel
Scientific Name: *Daption capense*

Size: 15-16 inches (38-40 cm)

Habitat: Southern Hemisphere; Cape Petrels breed on numerous islands surrounding Antarctica. A few pairs nest as far north as New Zealand's Auckland Islands, the Chatham Islands and Campbell Island; the majority of the species nest further south. The species' stronghold is on the Antarctic Peninsula and the islands of the Scotia Sea. They also breed on other sites on the Antarctic mainland, as well as South Georgia, the Balleny Islands, and Kerguelen Island.

Status: Least Concern. **Global Population:** 2,000,000 mature individuals.

Diet: Euphausiid shrimp and other crustaceans make up 4/5 on their diet ; they will also eat fish and squid usually by following fishing boats. They get their prey by seizing from the ocean surface and by plunging under the water and filtering the seawater.



Nesting: They are colonial, nesting on rocky cliffs or on level rocky ground no further than a km from the sea. The nests are simple and are usually placed under an overhanging rock for protection. A single egg is laid in mid to late November and incubated for around 45 days. Both parents take shifts of several days incubating the egg, with the male shifts on average lasting a day longer. Like fulmars Cape Petrels will aggressively defend their nesting site by ejecting stomach oil at intruders; skuas in particular will prey on Cape Petrel eggs and chicks. Once hatched the chick is brooded for 10 days until it is able to thermoregulate, after which both parents hunt at sea to feed it. Cape Petrel chicks fledge after around 45 days.

Cool Facts: The plumage pattern of the Cape Petrel is unique amongst its species family. Their habit of pecking at the water to seize prey is the origin of one of their common names, the “Cape Pigeon”.

Common Name: Southern Giant Petrel
Scientific Name: *Macronectes giganteus*

Size: 37-39 inches (87-99 cm)

Habitat: Southern Hemisphere; breeds on the Falkland Islands (Islas Malvinas), Staten Island and islands off Chubut Province (Argentina), South Georgia (Georgias del Sur), the South Orkney and South Shetland Islands, islands near the Antarctic Continent and Peninsula, Prince Edward Islands (South Africa), Crozet Islands (French Southern Territories), Heard Island and Macquarie Island (Australia), with smaller populations on Gough Island, Tristan da Cunha (St Helena to UK), Diego Ramirez and Isla Noir (Chile), Kerguelen Islands (French Southern Territories), and four localities on the Antarctic Continent including Terre Adélie.

Status: Vulnerable. **Global Population:** 97,000 mature individuals. The population of southern giant petrels underwent a decline of at least 20 percent over the last 60 years. Between 1997 and 1998, an estimated 2,000 to 4,000 southern giant petrels were killed in illegal and unregulated longline fisheries for Patagonian toothfish in the Southern Ocean. Other threats include a decline in the population of the southern elephant seal *Mirounga leonine* (an important source of carrion for the petrel), increasing disturbance by humans and persecution. The Southern Giant Petrel is listed as endangered in Australia.

Diet: Seal and penguin carcasses, offal, refuse from ships and discarded fish; they often feed close to trawlers and vessels fishing with longlines. They also prey upon penguins and other birds, krill and amphipod crustaceans, fish



and squid. During chick rearing, they depend heavily on penguins and seal colonies, as a food resource.

Nesting: There are two color forms of this species: a rare white form that is flecked with black and a dark form with mottled greyish-brown feathers with a paler belly. In this dark form, the head, neck and upper area of the breast whitens with age. The sexes are similar and juveniles are sooty-black in color. It typically nests in loose colonies on grassy or bare ground, often close to penguin colonies. However, in the Falkland Islands it can nest in large, relatively dense colonies. Average age of first breeding is c.10 years, and mean adult annual survival at South Georgia is 90%.

Cool Facts: Petrels are able to regurgitate foul-smelling oil which they spit at intruders; this habit earned the southern giant petrel the alternative name of 'stinker'.

Males and females have distinct foraging ranges during the breeding season.



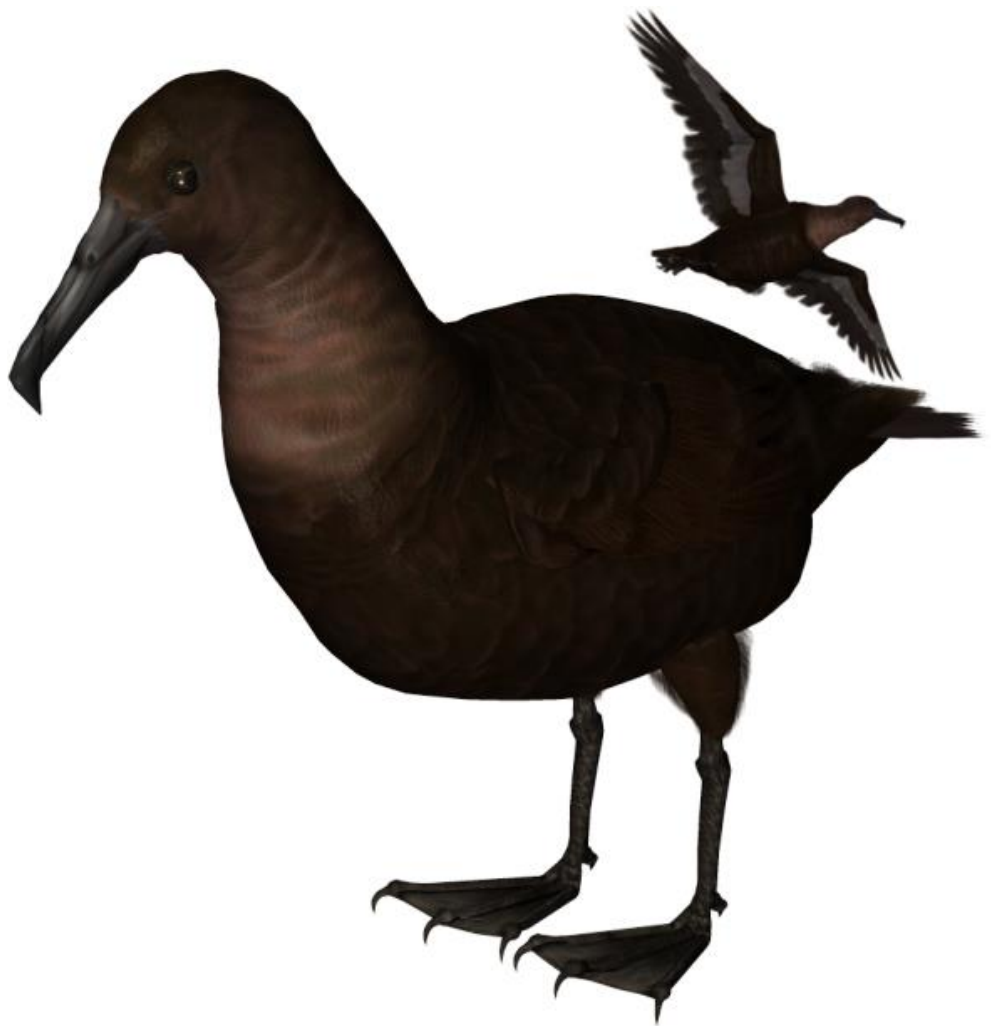
Common Name: Sooty Shearwater
Scientific Name: *Puffinus griseus*

Size: 15 $\frac{3}{4}$ - 19 $\frac{1}{2}$ inches (40-50 cm)

Habitat: Southern Hemisphere; they are long-distance migrants, following a circular route, travelling north up the western side of the Pacific and Atlantic Oceans at the end of the nesting season in March-May, reaching sub Arctic waters in June-July where they cross from west to east, then returning south down the eastern side of the oceans in September-October, reaching to the breeding colonies in November. They do not migrate as a flock, but rather as single individuals, associating only opportunistically.

Status: Near Threatened. **Global**

Population: 20,000,000 mature individuals. Along with the Short-tailed Shearwater, the Sooty Shearwater is one of the most numerous shearwaters. The total population is probably in the tens of millions. In recent years however, numbers off parts of the West Coast have declined significantly. It is speculated that this decline may be as a result of the rise in sea surface temperatures. It is presently classified as Near Threatened by the IUCN.



Diet: Fish and squid. They can dive up to 220 feet (68 m) underwater for food, but more commonly take surface food, in particular often following whales to catch fish disturbed by them or fishing boats to take fish scraps thrown overboard.

Nesting: They breed in huge colonies and the female lays one white egg. These shearwaters nest in burrows lined with plant material which are visited only at night to avoid predation by large gulls. This shearwater is often loud, cooing and croaking while on the breeding grounds.

Cool Facts: This bird from a distance may look all black, but in good light it shows as dark chocolate-brown a silvery strip along the center of the underwing and gets its name by its dark plumage. Shearwaters get their name from the "shearing" look flight, dipping from side to side on stiff wings with few wing beats, the wingtips almost touching the water. Its flight is powerful and direct, with wings held stiff and straight, giving the impression of a very small albatross.

In New Zealand, tītī are traditionally harvested each year by the native Māori. Young birds just about to fledge are collected from the burrows, plucked and often preserved in salt.

Common Name: Double-crested Cormorant
Scientific Name: *Phalacrocorax auritus*

Size: 28-35 inches (70-90 cm)

Habitat: North America; **Summer Range:** Widely distributed across North America. Breeds locally along all coasts and extensively in Florida, the center of continent, and along the Great Lakes and the St. Lawrence Seaway. Also in Mexico, Belize, the Bahamas, and Cuba. **Winter Range:** Winters along Pacific Coast from Alaska to Mexico; along the Atlantic and Gulf coasts from North Carolina to Belize, with smaller numbers northward to New Hampshire; and at inland sites along large rivers and lakes northward to Indiana. Found in diverse aquatic habitats, such as ponds, lakes, rivers, lagoons, estuaries, and open coastline; more widespread in winter.



Status: Least Concern. **Global Population:** 1,100,000 - 2,200,000 mature individuals. Common and widespread throughout its range. Cormorant populations greatly decreased in the 19th and early 20th centuries from human persecution. They recovered after the 1920s, with an interruption in the recovery during the pesticide era of the 1950s and 1960s. The National Audubon Society

considered it a species of special concern in 1972. Increases after the 1970s were explosive in some areas. Increasing cormorant populations have caused conflicts with people. Cormorants have been suggested as playing an important role in the collapse of some fisheries, although data to support these claims are sparse. Cormorants eat fish at fish farms, and recent legislation has been proposed to control cormorant numbers.

Diet: Predominantly fish; some other aquatic animals, insects, and amphibians.

Nesting: Sexes are alike. Nests are a large, often flat nest of sticks and other bulky items, including seaweed and flotsam. It is lined with grass or similar material and is placed in trees, on the ground, or on cliffs. Cormorants nest in colonies. Nests often are exposed to direct sun. Adults shade the chicks and also bring them water, pouring it from their mouths into those of the chicks. There are usually 3-4 unmarked pale blue eggs.

Cool Facts: While the cormorant uses sticks and other materials to make its nest, it frequently picks up junk, such as rope, deflated balloons, fishnet, and plastic debris to incorporate into the nest. Parts of dead birds are commonly used too. Large pebbles are occasionally found in cormorant nests, and the cormorants treat them as eggs.

Accumulated fecal matter below nests can kill the nest trees. When this happens, the cormorants may move to a new area or they may simply shift to nesting on the ground.

Common Name: Blue-footed Booby
Scientific Name: *Sula nebouxii*

Size: 32 inches (81 cm)

Habitat: North and South America; distributed among the continental coasts of the eastern Pacific Ocean to the Galapagos Islands and parts of California.



Status: Least Concern. **Global Population:** 100,000-499,999 mature individuals

Diet: Sardines, anchovies, mackerel, and flying fish. They also feed on squid and offal.

Nesting: The courtship of the Blue-footed Booby consists of the male flaunting his blue feet and dancing to impress the female. During the dance, the male will spread his wings and stamp his feet on the ground. The Blue-footed Booby is a monogamous animal although they do have the potential to be bigamous. They reunite at their breeding grounds. The breeding cycle of the booby is every 8 to 9 months. When mating, the female parades and the male points his head and tail high to

the sky and his wings are back to show off to the female. The male blue-footed booby also makes a high-piping whistle noise. Males do a dance to attract the females. The dance includes the males lifting their blue feet high and throwing their heads up. The blue-footed booby is not a seasonally reproducing species. They are opportunistic in their breeding.

The female Blue-footed Booby lays two or three eggs. Both male and female take turns incubating the eggs, while the non-sitting bird keeps a watch. Since the Blue-footed Booby does not have a brooding patch (a patch of bare skin on the underbelly) it uses its feet to keep the eggs warm. The chicks cannot control their body temperature up until about one month old. Eggs are laid about 5 days apart. Blue-foots are one of only two species of booby that raise

more than one chick. This may be because of the males specialized diving in shallow waters. They must be fed frequently, so the adults constantly hunt for fish. The chicks feed off the regurgitated fish in the adult's mouth. If the parent Blue-footed Booby does not have enough food for all of the chicks, it will only feed the biggest chick, ensuring that at least one will survive. Boobies may use and defend two or three nesting sites until they develop a preference a few weeks before the eggs are laid. Usually 2 to 3 eggs are laid and 1 to 2 chicks are hatched. The incubation period is 41-45 days. They nest on bare black lava in a small dip in the ground. The female will turn to face the sun throughout the day so the nest is surrounded by excretion. These nests are done in large colonies. The male and female share quite a bit of their responsibilities. The male will provide food for the young in the first part of their life because of his specialized diving and the female will take over when the demand is higher.

Cool Facts: The name "booby" comes from the Spanish term bobo, which means "Stupid". This is because the Blue-footed Booby is clumsy on the land. Like other seabirds, they can be very tame. Blue-foots will make raucous or polysyllabic grunts or shouts and thin whistle noise. The males of the species have been known to throw up their head and whistle at a female flying by. Their ritual displays are also a form of communication.

Blue-footed Boobies are specialized fish eaters feeding on school fish. They dive into the ocean, sometimes from a great height, and swim underwater in pursuit of its prey. It hunts singly, in pairs or in larger flocks. They travel in parties of 12 or so to areas of water with large schools of small fish. When the lead bird sees a fish shoal in the water, it will signal the rest of the group and they will all dive together to catch the fish. Surprisingly, individuals do not eat with the hunting group, preferring to eat on their own, usually in the early morning or late afternoon. When they spot a school they will all dive in unison. They will point their bodies down like a torpedo and dive into the water. Plunge diving can be done from heights of 33-100ft and even up to 330 ft (100 m). These birds hit the water around 60 mph (97 km/h) and can go to depths of 82 ft (25 m) below the water surface. The prey is usually eaten while the bird is still under water. Males and females fish differently which could contribute to the reasons that blue foots, unlike other boobies raise more than one young. The male is smaller and the tail is larger for its body which enables the male to fish in shallow areas instead of just deep waters. The tail can flatten out easier enabling him to change direction in the shallow water. The female is larger and can carry more food. The food is then regurgitated to the young. The males feed the young for the first part of the incubation period. This is done because the males can bring back food quicker than the female. When the demand for more food takes over the female provides the food to the young.

Common Name: Arctic Skua or Parasitic Jaeger
Scientific Name: *Stercorarius parasiticus*

Size: 16.5 - 20 inches (41-50 cm)

Habitat: North America, the Arctic and Northern Eurasia. Migrates; wintering at sea in the tropics and southern oceans.

Status: Least Concern. **Global Population:** 500,000 - 10,000,000 mature individuals

Diet: Lemmings and other rodents on the breeding grounds, but also robs gulls and terns of their catches. Like the larger skua species, it continues this piratical behavior throughout the year, showing great agility as it harasses its victims.



Nesting: It nests on dry tundra, higher fells and islands, laying up to four olive-brown eggs.

Cool Facts: It is usually silent except for mewing and wailing notes while on the breeding grounds. It is very aggressive and will fly at the head of a human or fox approaching its nest. Although skuas cannot inflict serious damage, it is a painful experience.

Common Name: Common or Mew Gull
Scientific Name: *Larus canus*

Size: 11 inches (28 cm)

Habitat: Northern Hemisphere; breeds in northern Asia, northern Europe and northwestern North America. It migrates further south in winter.

Status: Least Concern. **Global Population:** 2,500,000 - 3,700,000 mature individuals.



Diet: Small fish and animals by hunting or scavenging.

Nesting: They breed in colonies near water or in marshes, making a lined nest on the ground or in a small tree; colony size varies from 2 to 320 or even more pairs. Usually three eggs are laid; they hatch after 24-26 days, with the chicks fledging after a further 30-35 days

Cool Facts: There are four subspecies of Common Gull (two of them considered distinct species by some authorities):

- *Larus canus canus* (Europe and western Asia. Small; mantle medium grey (palest subspecies); wingtips with extensive black; iris dark.)
- *Larus canus heinei* (Central northern Asia. Medium size; mantle dark grey (darkest subspecies); wingtips with extensive black; iris dark.)
- *Larus canus kamtschatschensis* (Northeastern Asia. Large; mantle medium-dark grey; wingtips with extensive black; iris pale.)
- *Larus canus brachyrhynchus* (Alaska and western Canada. Small; mantle medium-dark grey; wingtips with little black and much white; iris pale)

Common Name: Glaucous Gull

Scientific Name: *Larus hyperboreus*

Size: 27 inches (68.5 cm)

Habitat: North America and Eurasia; Arctic regions of the northern hemisphere and the Atlantic coasts of Europe. It is migratory, wintering from in the North Atlantic and North Pacific oceans as far south as the British Isles and northernmost states of the USA, also on the Great Lakes. A few birds sometimes reach the southern USA and northern Mexico.

Status: Least Concern. **Global Population:** 340,000 - 2,400,000 mature individuals.

Diet: Small fish and animals by hunting or scavenging.

Nesting: This species breeds colonially or singly on coasts and cliffs, making a lined nest on the ground or cliff. Normally, 2-4 light brown eggs with dark chocolate splotches are laid.



Cool Facts: They will scavenge as well as seeking suitable small prey. These birds forage while swimming or walking, also may pick up items off water or catch small birds while flying. They often follow fishing boats and are one of the most predatory gulls.

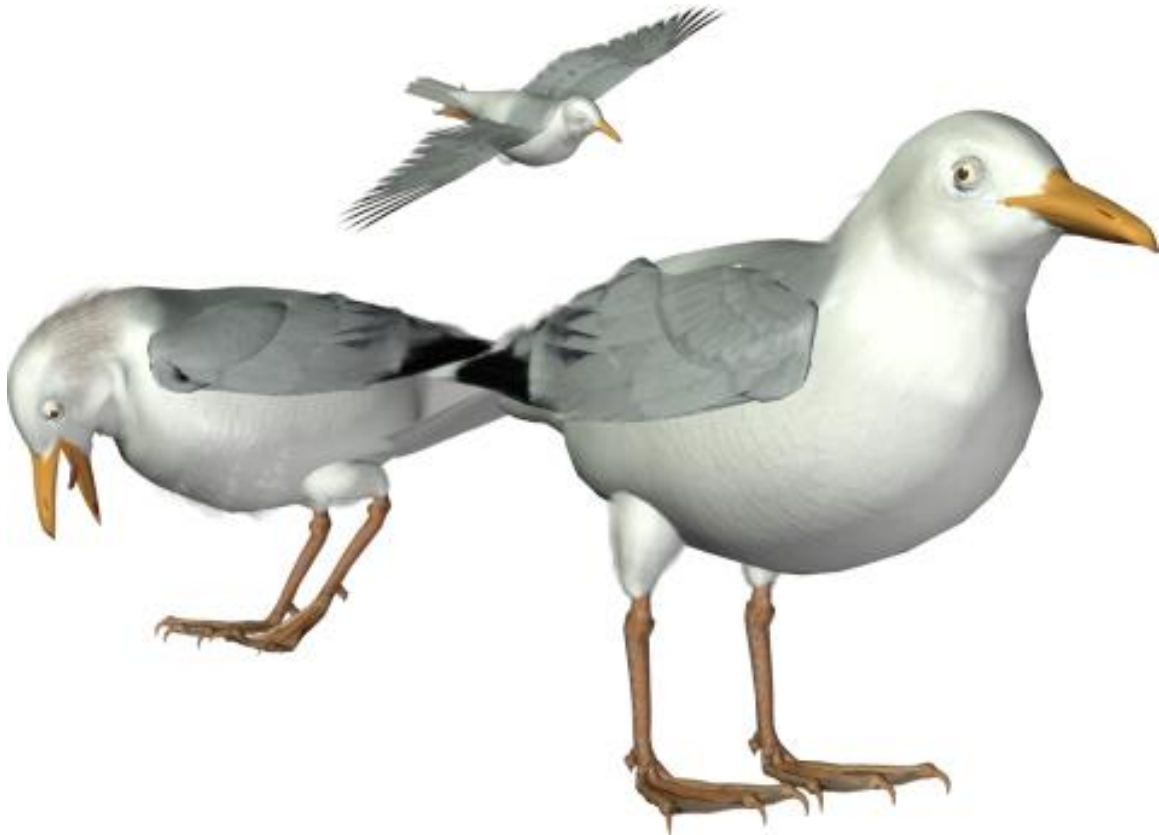
Common Name: Herring Gull
Scientific Name: *Larus argentatus*

Size: 25 inches (63.5 cm)

Habitat: North America and Eurasia; Arctic regions of the northern hemisphere and the Atlantic coasts of Europe. It breeds across North America, Europe and Asia. Some Herring Gulls, especially those resident in colder areas, migrate further south in winter, but many are permanent residents, e.g. those on the lower Great Lakes, on the east coast of North America or at the North Sea shores. Herring Gulls are also abundant around inland garbage dumps, and some have even adapted to life in inland cities.

Status: Least Concern. **Global Population:** 2,700,000 - 5,700,000 mature individuals.

Diet: Scavenge on rubbish tips and elsewhere, as well as seeking suitable small prey in fields, on the coast or in urban areas, or robbing plovers or lapwings of their catches. Despite their name, they have no special preference for herrings.



Nesting: Two to four eggs, usually three, are laid on the ground or cliff ledges in colonies, and are defended vigorously by this large gull. The eggs are a dark blotched, olive color. They are incubated for 28-30 days.

Juveniles use their beaks to "knock" on the red spot on the beaks of adults to indicate hunger. Parents typically disgorge food for their offspring when they are "knocked". The young birds are able to fly 35-40 days after hatching.

Like most gulls, Herring Gulls are long lived, with a maximum age of 49 years recorded.

Cool Facts: It is the most abundant and best known of all gulls along the shores of Asia, western Europe, and North America. Herring Gull flocks have a loose pecking order, based on size, aggressiveness and physical strength.

Communication between these birds is complex and highly-developed - employing both calls and body language. Two identical vocalizations can have very different (sometimes opposite) meanings, for example - depending on the positioning of the head, body, wings and tail relative to each other and the ground in the calling gull.

Unlike many flocking birds, Herring Gulls do not engage in social grooming and keep physical contact between individuals to a minimum. Outside of the male/female and parent/chick relationship, each Herring Gull attempts to maintain a respectful 'safe distance' from others of its kind. Any breach of this results in fighting, though severe injuries are seldom inflicted.

Herring Gulls are known to be capable of seeing ultraviolet light.

Common Name: Common Tern
Scientific Name: *Sterna hirundo*

Size: 13-14.5 inches (34-37 cm)

Habitat: North America and Eurasia; a circumpolar distribution breeding in temperate and sub-Arctic regions of Europe, Asia and east and central North America. It is strongly migratory, wintering in the subtropical and tropical oceans.

Status: Least Concern. **Global Population:** 1,600,000 - 4,600,000 mature individuals.

Diet: Fish and small marine invertebrates; in fresh or saltwater.



Nesting: This species breeds in colonies on coasts and islands and often inland on suitable freshwater lakes. This latter practice is assisted by the provision of floating "tern rafts" to give a safe breeding area. It lays two to four eggs. Like many white terns, it is very defensive of its nest and young and will attack humans and other large predators, but unlike the more aggressive Arctic Tern rarely hits the intruder, usually swerving off at the last moment.

Cool Facts: The Common Tern is sometimes known as the sea swallow. The old Scottish word for the Common Tern is "pictar". The Common Tern is most readily confused within its range with the similar Arctic Tern (*Sterna paradisaea*) and Roseate Tern (*Sterna dougalli*); its long tail extends only to the wingtips on the standing bird, unlike Arctic and Roseate Terns, which extend past the wingtips. It is not as pale as Roseate Tern, and has longer wings.

Common Name: White Fairy Tern
Scientific Name: *Gygis alba*

Size: 12.5 inches (33 cm)

Habitat: Pacific & Indian Oceans. It ranges widely and is found in the Caribbean, South Atlantic, Indian Ocean, South Pacific Islands, Hawaii and Eastern Australia. It nests on coral islands, usually on trees with thin branches but also on rocky ledges and on man-made structures

Status: Least Concern. **Global Population:** 150,000 - 1,100,000 mature individuals.

Diet: Small fish and squid it plucks from the surface or by diving. It can hold up to 5 held crossways in bill.

Nesting: This small tern is famous for laying its egg on bare thin branches in a small fork or depression without a nest. This behavior is unusual for terns, which generally nest on the ground. It is thought that the reason for the absence of nests is the reduction in nest parasites, which in some colonial seabirds can cause the abandonment of an entire colony. In spite of these benefits there are costs

associated with tree nesting, as the eggs and chicks are vulnerable to becoming dislodged by heavy winds. For this reason the White Tern is also quick to relay should they lose the egg. The newly hatched chicks have well developed feet to hang on to their precarious nesting site with. It is a long-lived bird, having been recorded living for 17 years.

Cool Facts: The Hawaiian name for the White Tern is “manu-o-Kū” . The White Tern is sometimes known as the “Fairy Tern” which is potentially confusing as because there’s another bird that goes by the same common name of “Fairy Tern” (*Sternula nereis*).



Common Name: Least Tern

Scientific Name: *Sternula antillarum* (formerly *Sterna antillarum*)

Size: 8.5-9 inches (22-24 cm)

Habitat: North and South America; breeds in North America and locally in northern South America.

Status: Least Concern/Endangered. **Global Population:** 65,000 - 70,000 mature individuals. Although widespread and common in places, its favored nesting habitat is prized for human recreation, residential development, and alteration by water diversion, which interferes with successful nesting in many areas. It is classified as "Threatened," "Endangered," or "species of concern" for most states because of loss of nesting habitat. Interior Population federally listed as "Endangered" in 1985.

Diet: Anchovy, smelt, silversides, shiner surfperch and small crustaceans.



Nesting: The Least Tern arrives at its breeding grounds in late April. The breeding colonies are not dense and may appear along either marine or estuarine shores, or on sand bar islands in large rivers, in areas free from humans or predators. Courtship typically takes place removed from the nesting colony site, usually on an exposed tidal flat or beach. Only after courtship has confirmed mate selection does nesting begin by mid-May and is

usually complete by mid-June. Nests are situated on barren to sparsely vegetated places near water, normally on sandy or gravelly substrates. In the southeastern United States, many breeding sites are on white gravel rooftops. In the San Francisco Bay region, breeding typically takes place on abandoned salt flats. Where the surface is hard, this species may use an artificial indentation (such as a deep dried footprint) to form the nest basin.

The nest density may be as low as several per acre, but in San Diego County, densities of 200 nests per acre have been observed. Most commonly the clutch size is two or three, but it is not rare to consist of either one or four eggs. Both female and male incubate the eggs for a period of about three weeks, and both parents tend the semiprecocial young. Young birds can fly at age four weeks. After formation of the new families, groupings of birds may appear at lacustrine settings in proximity to the coast. Late season nesting may be re-nests or late season arrival activity. In any case, the bulk of the population has left the breeding grounds by the end of August.

Cool Facts: The Least Tern is the smallest of the American Terns. It hunts primarily in shallow estuaries and lagoons, where smaller fishes are abundant. They hover until spotting prey, and then plunge into the water without full submersion to extract dinner.

Common Name: Black Skimmer
Scientific Name: *Rynchops niger*

Size: 16-19 inches (40-50 cm)

Habitat: North and South America; United States East Coast, the Caribbean and the Amazon Basin. Northern populations winter in the warmer waters of the Caribbean and the tropical and subtropical Pacific coasts, but the South American races make only shorter movements in response to annual floods which extend their feeding areas in the river shallows.

Status: Least Concern. **Global Population:** 120,000 - 210,000 mature individuals. Populations were declining in 1970s, but appear to have stabilized in most places.

Diet: Small fish or crustaceans. They feed usually in large flocks, flying low over the water surface with the lower mandible skimming the water, caught by touch by day or especially at night.

Nesting: The Black Skimmer breeds in loose groups on sandbanks and sandy beaches in the Americas, the three to seven heavily dark-blotched buff or bluish eggs being incubated by both the male and female. The chicks leave the



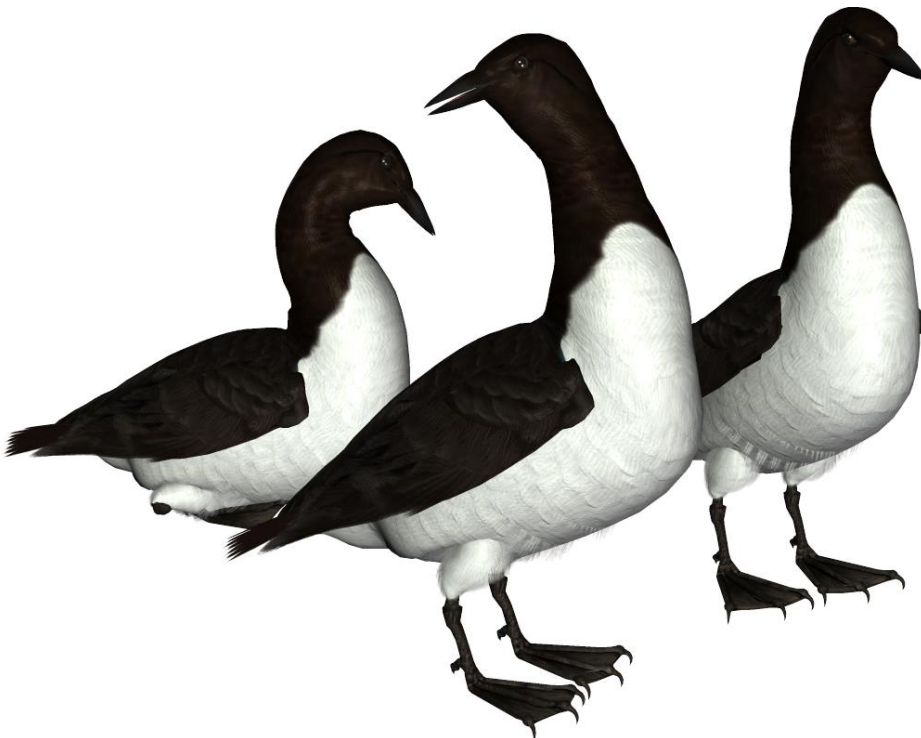
nest as soon as they hatch and lie inconspicuously in the nest depression or "scrape" where they are shaded from high temperatures by the parents. They may dig their own depressions in the sand at times. Parents feed the young almost exclusively during the day with almost no feeding occurring at night, due to the entire population of adults sometimes departing the colony to forage. Although the mandibles are of equal length at hatching, they rapidly become unequal during fledging.

Cool Facts: Skimmers have a light graceful flight, with steady beats of their long wings. They spend much time loafing gregariously on sandbars in the rivers, coasts and lagoons they frequent.

Common Name: Common Guillemot or Thin-billed Murre
Scientific Name: *Uria aalge*

Size: 15-18 inches (38–46 cm)

Habitat: Northern Hemisphere; It has a circumpolar distribution, occurring in low-Arctic and boreal waters in the North-Atlantic and North Pacific. It spends most of its time at sea, only coming to land to breed on rocky cliff shores or islands.



Status: Least Concern.
Global Population: 18,000,000 mature individuals. Numerous, but vulnerable to oil spills and gill-netting. Pacific populations have declined and partially recovered, while Atlantic populations appear to be increasing.

Diet: Small Fish; primarily polar cod, capelin, sand lances, sprats, sandeels, Atlantic cod and Atlantic herring.

Nesting: Common Guillemots breed in colonies at high

densities, nesting pairs may be in bodily contact with their neighbors. They make no nest, their single egg is incubated on bare rock. Eggs hatch after ~30 days incubation. The chick is born downy, and can regulate its body temperature after 10 days. They leave the nest site in around 20 days accompanied by the male parent. Chicks cannot fly when they leave the nest but are capable of diving as soon as they hit the water. The female stays at the nest site about 14 days after the chick has left.

Cool Facts: The Common Guillemot is a large auk. It is also known as the Thin-billed Murre in North America. Common Guillemots have fast direct flight but are not very agile. They are more maneuverable underwater, typically diving to depths of 30–60 m.

The egg of a Guillemote is so pointed at one end that when placed on a flat surface and pushed, it rolls around in a circle. Such a shape may help keep the egg from rolling off of its nesting shelf.

Special Thanks to...

....my beta testers (Bea, Jan, Kelvin, Nancy, Rhonda and Sandra)

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>)



Rendering Tips

Working with Songbird Remix morphs

Because birds in the Songbird ReMix series use generic bird bases and morphs, adding morphs upon morphs more often than not will create undesirable results. Case in point is the Parrot base which defaults with the “Parrot” morph loaded (which is found in the HEAD section (*Creations morphs : Specific Bird morphs*)). Adding the other creation morphs on top of that will be a hit and miss experience. Press **CTRL + E** to clear all the morphs in that section.

The reason why I have chosen to leave non-parrot morphs on for instance the parrot base is for experimentation and creating unique and imaginary species. In some cases, such as with a parakeet, it’s better to shape the parakeet head from the standard Songbird ReMix head than the default parrot morphs.

Another example is the BK-Close morph use. When BK-Height or BK-Length morphs are used often the BK-Close will require only a 0.7 or 0.8 setting to close the beak which normally takes a 1.0 setting. When applying a pose to a bird with a thicker or thinner than normal beak, you may need to adjust the BK-Close setting. The same is true with legs with shorten shins or thighs. One size does not fit all with a generic bird model.

In VUE...

Vue often creates dark squares on Songbird ReMix wings. I'm not really sure why this happens and there's no easy solution. One thing that will minimize the issue is to use "Poly Mesh Options" and split the model shoulders (wings) by materials. Select the "wingfeathers" material in each shoulder to change the smoothing to 60% or less. The easiest way to do this is in combination with the sub-divide method. I also often find it better to also cut down the “Highlight Global Intensity” to 40% and “Highlight Global Size” to 50% on Plumage, Wings and Beak materials in the “Highlights” section.

The best solution is to save your bird as an .obj, then go into a 3D modeller and sub-divide the "wingfeathers" material once and save the .obj. If you do this you may have to re-enter the transparent material maps. Another way, or in combination with the sub-divide method, is to try turning the "wingfeathers" material smoothing down to 60% or less (either on the Poser CR2 or in the VUE mesh editor. This corrects 95% of the issues.

Sub-dividing the "Fluff" materials helps to cut down on the rings and graying that occur in Vue on Fluff areas.

In Carrara...

Carrara can have multiple issues with Songbird Remix models. The most common are scaling issues; Carrara does not accept internal Propagating Scale (a scale variable tied to the parent that tells all attached children to do the same) so will not import Poser files correctly. Songbird ReMix uses Propagating Scale in the wings, feet and head regions. Most issues seem to be tied to the Foot Scaling. Determine the amount of scaling in the foot and scale the 8 talon parts to match each foot.

The second most common problem is weird shapes or depressions in the rump area. This is because Carrara does not understand how to interrupt the scaling of the thighs. The best and easiest solution is to set each Thigh parts YScale to 100%.

I have seen some issues (primarily with the wings exploding) when importing a Poser scene file (.pz3) into Carrara. This doesn't appear to happen all of the time. I've corrected it by going into the BODY and each WING part and turning off/on the Wing Fold morph and making sure the BODY section's Wing Shapes are all in the default setting.

There is a Carrara Fix package available in the SongbirdReMix.com downloads that provides foot scaling poses.

In DAZ|Studio...

DAZ Studio can have multiple issues with Songbird Remix models when using the Poser Version. **Download and Use the DAZ|Studio version.** I used to provide each bird as a saved scene (.daz) in Studio but unfortunately with each newer version of Studio, the .daz format from previous versions is less stable; something not loading, sometimes mismapping textures. The current approach (described in the "Creating a Bird in DAZ Studio"), while less convenient, does load and display the birds correctly with all versions of DAZ Studio.

The primary issue with using the Poser version with DAZ|Studio is Scaling; DAZ|Studio does not accept internal Propagating Scale (a scale variable tied to the parent that tells all attached children to do the same) so it will not import Poser files correctly. Songbird ReMix uses Propagating Scale in the wings, feet and head regions. Most issues seem to be tied to the Foot Scaling. Determine the amount of scaling in the foot and scale the 8 talon parts to match each foot. The second issue is that material setting will be off. The DAZ|Studio version has Material files tuned to DAZ|Studio included. This version also has Character files so it is possible to load the Poser .cr2, then apply the DAZ|Studio character setting which will fix the scaling and material issues. This method can be helped if updated Songbird Remix CR2s are available.

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

