

## PINK-FOOTED SHEARWATER - PUFFINUS CREATOPUS

The species were for a long time included in the genus Puffinus, but this genus was split based on the results of a phylogenetic analysis of mitochondrial DNA. The genus had been introduced by Ludwig Reichenbach in 1853, although the name was first used to refer to a seabird by Italian naturalist Ulisse Aldrovandi in 1603.

**Taxonomy:** Kingdom: Animalia Phylum: Chordata Class: Aves Order: Procellariiformes Family: Procellariidae Genus: *Ardenna* Species: *A. creatopus*

### **Habitat:**

**Biomes:** This species is pelagic, occurring in the Pacific Ocean. It predominantly nests on offshore islands off Chile, i.e. Mocha Island. It is a transequatorial migrant, moving toward subarctic waters of the Pacific after raising its young. It is fairly common well off the West Coast of the United States during the country's warmer months.

### **Distribution:**

**In US:** Extremely common along the West/Pacific Coast of the United States

**In Other Countries:** Also common along the West/Chilean Coast of South America

**Holistic Description:** The Pink-footed Shearwater is a large shearwater of the eastern Pacific Ocean. It is distinctive within its range, with flesh-colored feet and bill, pale underparts, and brown upperparts. It breeds on the Juan Fernández Islands and Mocha Island off central Chile and disperses northward to wintering areas in the eastern North Pacific Ocean. Pairs nest colonially in burrows, where they lay a single egg. Breeding sites are generally on forested slopes, while at sea this species prefers offshore waters. It preys on fish, squid, and crustaceans both by seizing them at the surface and plunging from the air.

**Species Richness:** NONE

**Population Dynamic:** This species has a very small breeding range at only three known locations, which renders it susceptible to stochastic events and human impacts. Hence it is listed as Vulnerable. If invasive species, harvesting of chicks, bycatch in fisheries or other factors are found to be causing population declines, the species might warrant uplisting to Endangered. Numbers of this shearwater have been reduced due to predation by introduced species, such as rats and cats. Some loss of birds also occurs from becoming entangled in fishing gear.

### **Evolution and Systematics:**

**Evolution:** NONE

**Systematics:** It is polymorphic, having both darker- and lighter-phase populations. Together with the equally light-billed flesh-footed shearwater, it forms the Hemi-Puffinus group, a superspecies that may or may not have an Atlantic relative in the great shearwater. These are large shearwaters which are among those that could be separated in the genus *Ardenna*.

**Number of Species:** NO SUBSPECIES

**Number of Genera:** NO SUBSPECIES

### **Physical Characteristics:**

**Size and Length:** Length: 48cm (18.89ft) Weight: 1.3 lbs

**Wingspan:** 109 cm

**Coloration:** Large shearwater, gray-brown upperparts, white underparts, mottled brown flanks and undertail coverts. Head is gray-brown and pink bill is tipped with black. Flight feathers are dark-bordered and underwing coverts are mottled gray. Alternates slow wing beats with low glides.

**General Body Features:** The largest of the shearwaters to be seen commonly off our Pacific Coast, with rather heavy and slow wingbeats, often gliding and wheeling above the waves, especially in windy conditions.

**Special Features of the Body:** These seabirds have oily, waterproof feathers and a dense undercoat of insulating down. Their webbed feet help them swim, and are also used, especially by the storm petrels, to patter upon the ocean surface in search of floating bits of food. The strong bill has a food-grabbing hook on the end, and the typical dark, or dark-and-light plumage helps them blend into a monochromatic landscape. The petrels and shearwaters have a characteristic musky odor arising from their stomach oils, which are used as a food for the young, as a defensive weapon (squirted when needed), and as additional waterproofing for their feathers.

**Special Features of the Head and Sensory Organs:** Characteristic tubular nostrils located on top of the bill serve as a means of expelling saline solution from their large salt glands, located internally near the eye sockets. The salt glands allow these birds to drink sea-water without any harmful effects, since their kidneys cannot produce a concentrated urine. The horny structure of the exterior nostrils protects the internal nasal passageway from the irritating salt spray, and also serves as an

opening to their very efficient olfactory organs. Petrels and shearwaters have an excellent sense of smell, which they use to find food, burrows, and other birds of their species.

Dentition: Lamellae and Gizzard

Special Features of the Limbs and Digits: Most species have long narrow wings designed for gliding and soaring, while some of the smaller diving petrels have short stubby wings that work well in the underwater pursuit of fish. To watch these graceful birds "shearing" the wavetops with their stiff-winged, seemingly effortless flight, is to witness a true natural wonder.

Any Special Internal Anatomy: LOOK AT SPECIAL FEATURES OF BODY

Sexual Dimorphisms: Male and female are similar, but the female is slightly smaller overall.

Differences Between Juvenile Stage and Adult: The juvenile resembles adult. It is in fresh plumage in May/July.

### **Behavior:**

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: Forages mostly by plunging into water from flight or diving from surface, and swimming short distance underwater with wings spread; also seizes items while swimming on surface. May follow boats for scraps or offal. It performs plunge-diving from flight, and may occasionally completely submerge for a few seconds. It swims underwater with the wings while pursuing a prey. It also snatches food items from the surface while flying low over water. It may follow boats and can form large foraging flocks of up to 1000 individuals, associated with other Procellariidae, albatrosses, gulls and other seabirds. Smaller flocks of about 100 birds can be seen over schools of dolphins that drive the preys towards the surface.

Locomotion: LOOK AT SPECIAL ADAPTATIONS AND ACTIVITY ABOVE. The Pink-footed Shearwater flies by gliding rather than flapping. This species is often seen tilting to the side while flying, until one wing almost touches the water surface. It has usually slower wingbeats than the Sooty Shearwater, and it soars more than other shearwaters.

Communication and Perception: The Pink-footed Shearwater gives nasal and squawking calls while foraging in groups. It is usually more vocal in flight than on the ground.

Home Range: NONE

Degree of Sociality: LOOK AT ACTIVITY

Level of Aggression: NONE

Migration: The Pink-footed Shearwater moves N after breeding, and can be seen off North America W coasts between May and November, with peak numbers in September. They migrate N through E Pacific, and usually well offshore. Some of them reach the Gulf of Alaska. They return by the same route.

### **Predators:**

Predators: The Pink-footed Shearwater is affected by introduced predators on its breeding islands, especially rats and coatis, but also cats and dogs.

Anti-Predator Defenses: CHECK ADAPTATIONS

### **Diet and Nutrition:**

Adult Diet: Includes fish and squid. Diet not well known; in addition to fish and squid, probably eats various crustaceans.

Juvenile Diet: NONE

Special Adaptations for Getting Prey: CHECK ADAPTATIONS

### **Reproduction:**

Mode of Reproduction: Monogamous

Mating System: NONE

Mating Season: September to December

Courtship: NONE

Territoriality: NONE

Mating: NONE

Nesting: The Pink-footed Shearwater is colonial nester and nests in self-excavated burrow often reused in several following years. They are monogamous with long-term pair-bonds. This species is hard to observe on land, and its breeding behaviour is poorly known. The birds are active at colonies mainly at night, from dusk to just before dawn. Before the egg-laying, the mates often rest together inside their burrow. They call softly in duet, and preen each other's head and neck. Breeding behavior not well known. Nests in colonies on islands far off coast of Chile. Active at colonies mostly at dusk and at night. Adults gather near colonies in September; by October, some two months before eggs are laid, pairs may be resting together in burrows. Mated pairs may call softly in duet, preen each other's head and neck. Nest: Site is in burrow underground, often more than four feet long. Nest chamber may have sparse lining. Most eggs probably laid in early December.

Egg-Laying: One. White. Both sexes probably incubate; incubation period not known. Young: Probably fed by both parents during nocturnal visits; age at first flight not known. Young depart nesting islands in April and May.

Hatching and Incubation/Gestation: NONE

Development: Probably fed by both parents during nocturnal visits; age at first flight not known. Young depart nesting islands in April and May.

Parental Care: ^^

Lifespan: Around 15-19 years, but likely less because of invasive species and pollution problems.

**Conservation:**

Official Federal Status: Vulnerable

Special Statuses in Individual States: NONE

Threats: This species has a very small breeding range at only three known locations, which renders it susceptible to stochastic events and human impacts. Hence it is listed as Vulnerable. If invasive species, harvesting of chicks, bycatch in fisheries or other factors are found to be causing population declines, the species might warrant uplisting to Endangered. Numbers of this shearwater have been reduced due to predation by introduced species, such as rats and cats. Some loss of birds also occurs from becoming entangled in fishing gear. Pollution also drastically affects this species

Conservation Efforts: NONE

**Extra Facts:**

1. The Pink-footed Shearwater was first mentioned in the diaries and ship logs of sailing vessels that visited the Juan Fernández Islands in the late 1600s and early 1700s.
2. Although the practice of harvesting chicks for food is illegal on Isla Mocha, they are considered a local delicacy and 20 percent of the annual chick production (3,000–5,000) is harvested each year, from March to May, by the island's residents.
3. They appear similar to immature gulls but can be separated at great distances by their different flight styles. Shearwaters fly closer to the surface of the water, often disappearing behind swells.
4. A group of shearwaters are collectively known as an "improbability" of shearwaters.