

Charadrius nivosus (Snowy Plover)

Family: Charadriidae (Plovers)

Order: Charadriiformes (Shorebirds and Waders)

Class: Aves (Birds)



Fig. 1. Snowy plover, *Charadrius nivosus*.

[<http://www.hbw.com/ibc/photo/snowy-plover-charadrius-nivosus/adult-male-breeding>, downloaded 10 March 2017]

TRAITS. The snowy plover *Charadrius nivosus* is a small, pale shorebird 15-17cm long, weighing 34-58g, with a wingspan of about 34cm (Cornell University, 2015). It has a round head with a short neck and a short dark, slender bill; dark patches on the neck that go round to the chest; pale tan back and white under parts; wings, tail and head are also pale tan; legs are relatively short and grey to dark grey or black (IUCN, 2016). The breeding male plumage (Fig. 1) usually has black markings on the head and breast; in the breeding female these marks tend to be browner (WesternSnowyPlover.org, 2017). The juveniles are similar to the non-breeding adult plumage, but they have white edging on the wing feathers. *Charadrius nivosus* was previously considered to be a sub species of *Charadrius alexandrinus*, known as *Charadrius alexandrinus nivosus*. Recently, due to taxonomic advances, it has been separated into its own species, and the name *Charadrius alexandrinus* now only used to refer to the Old World populations known as the kentish plover.

DISTRIBUTION. *Charadrius nivosus* is a partial migrant and can be found breeding in North and Central America (Fig. 2), and as a migrant in western South America and the Caribbean (IUCN, 2016), and as a rare visitor in Trinidad and Tobago.

HABITAT AND ACTIVITY. Usually found in habitats that range from barren to sandy beaches and dry flats around lagoons. The snowy plover forages for food in the wet sand and amongst driftline kelp, in dry sandy beaches above the tide, on salt pans, and along the edges of salt marshes, salt ponds and lagoons (Cornell University, 2015). Adult snowy plovers for the most part forage along the edge of the water. They need an area that is flat so that they may be able to see approaching predators. Dunes on beaches are particularly useful to them as they are able to take cover during high tides and storm conditions. Nests are built in depressions on the ground in flat open areas where the ground is sandy or salty.

FOOD AND FEEDING. Carnivores and primarily visual foragers, snowy plovers feed on invertebrates such as crustaceans, worms and other small marine animals in wet sand and kelp using a feeding method known as run-stop-peck. In drier areas, they may also pick insects from low-growing vegetation or dry sand. Unique to the snowy plover is a method of catching flies and other insects on the beach. The plover runs through a crowd of insects with its mouth wide open so that it may snatch them in mid-air (Aquarium of the Pacific, 2011; Audubon, 2017).

POPULATION ECOLOGY. The non-breeding population is normally solitary, although flocks have been known to form for migration comprising of hundreds of individuals. The population of the North American snowy plovers, in the interior and on the eastern coasts, was estimated to be approximately 25,900 individuals in 2012 while on the Pacific coast, the population was estimated to be 2,900. Nesting populations have shown a decline in sites normally used along the coasts. The number of sites normally used in Washington decreased from 5 to 3 and those used in Oregon decreased from 29 sites to only 9 (U.S. Fish & Wildlife Service, 2001).

REPRODUCTION. Nesting occurs between early March and late September. The nest consists of a depression in the ground that may be lined with fragments of pebbles, shells, bones or mud that is camouflaged so that it is not immediately visible (Aquarium of the Pacific, 2011). Female snowy plovers usually lay 3 eggs, although 2-4 eggs in a clutch are not uncommon, even up to 6 eggs. The eggs are pale yellow and lightly covered in spots, which helps to camouflage them (Fig. 3). Egg laying can take 4-5 days and the incubation period is normally 25-35 days, on average 28 days, with females assuming the morning shift (Fig. 4), the males assuming the night shift (Aquarium of the Pacific, 2011). On average, the snowy plover rears two broods in a year, and in some cases three, when the breeding season extends past the usual period (WesternSnowyPlover.org, 2017).

BEHAVIOUR. Juvenile behaviour: The young plovers are able to leave the nest just a few hours after they hatch from their eggs. They are also able to hunt for their own food, with the adults sometimes leading them to suitable areas for feeding. The juveniles are able to fly usually between 28-32 days post hatching (WesternSnowyPlover.org, 2017).

Antipredator behaviour: When an adult snowy plover detects a predator near its offspring, it may fake injuries such as a broken wing and put on a display to distract the predator (Fig. 5) and lead it away from the nest and young. The adults may also use calls to signal to the chicks to crouch down (U.S. Fish & Wildlife Service, 2017).

APPLIED ECOLOGY. The species is listed as Nearly Threatened because its population has experienced a decline in some areas of its distribution range while remaining stable in other areas. This rapid decline is suspected to be a result of the loss of its habitat or the habitat becoming unsuitable for continued use. It is also suspected that the decline is due to their nesting sites being disturbed (IUCN, 2016).

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Posted online: 2017



Fig. 2. Snowy plover geographic distribution.

[<http://maps.iucnredlist.org/map.html?id=22725033>, downloaded 10 March 2017]



Fig. 3. Snowy plover eggs in nest.

[<http://institute.sandiegozoo.org/science-blog/art-western-snowy-plovers-nest>, downloaded 11 March 2017]



Fig. 4. Female snowy plover about to incubate eggs.

[<http://www.arkive.org/snowy-plover/charadrius-nivosus/image-G136682.html>, downloaded 11 March 2017]



Fig. 5. Snowy plover putting on a display to distract a predator.

[<http://www.arkive.org/snowy-plover/charadrius-nivosus/image-G135996.html>, downloaded 11 March 2017]

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