

# ABOUT THE COVER

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## Sooty and Greater shearwaters

Sooty (*Puffinus griseus*) and Greater (*P. gravis*) shearwaters are two of the most commonly encountered pelagic species on birding trips off the New England coast. They are “tubenose” species with nostrils that enter a single tube on the tops of their bills. Unlike most bird species, they have a well-developed sense of smell, and the tubenose may also be used to monitor airflow strength. Both have typical shearwater rapid flight on stiff, straight wings, with short bursts of flapping followed by a glide, banking and turning and often appearing to shear the water with their wing tips. They are among the bird world’s most efficient flyers, with their long, narrow wings making them phenomenal dynamic soaring birds—they glide with the wind and then turn into it, trading air speed for altitude, and then repeat the process. The Sooty Shearwater is a dark-bodied shearwater that flashes white on its underwings when soaring. The only east coast bird with which it can be confused is a dark-phase Northern Fulmar, but the fulmar lacks the white on the underwing and is a much dumper bird with comparatively short rounded wings. On the west coast it can be easily confused with the Short-tailed Shearwater, but the latter has less white on the underwing and a shorter bill, and the Flesh-footed Shearwater has no white on the underwing at all. The Greater Shearwater is generally white below but has a brownish belly patch and is dark gray-brown above. It can be told from the larger Cory’s Shearwater by the latter’s yellow bill, sandy-colored back and head, and the absence of the greater’s white collar and distinctly darker cap. The white underwing of the Cory’s lacks the distinctive dark stripes of the Greater Shearwater, and usually lacks the distinct white band on the upper tail. Both are monomorphic species with sexes similar in appearance.

Both species are birds of eternal summer, trans-equatorial migrants that breed in the southern hemisphere during the Austral summer and “winter” with us from May to September. Sooty Shearwaters breed on islands off the coast of southeastern Australia, the sub-Antarctic islands of New Zealand, and southern South America. Greater Shearwaters have breeding colonies on two islands in the Tristan da Cunha group and on Gough Island, a very restricted breeding range indeed. After breeding, most Sooty Shearwaters migrate to the Bering Sea and North Atlantic, but some remain in the southern hemisphere. Greater Shearwaters winter predominantly in the North Atlantic. Both species are gregarious during migration, with flocks of up to 200,000 Sooty Shearwaters reported. Greater Shearwaters often follow ships during their migration. Off the New England coast both shearwaters are common to abundant offshore residents from May to September, with Greater Shearwaters lingering through November. Greater Shearwaters are usually found in larger numbers (sometimes flocks of thousands) than Sooty Shearwaters except in May and early June. Sooty Shearwaters are often seen from shore. On George’s Banks upwards of 50,000 Greater and 15,000 Sooty shearwaters have been reported, and off Cape Cod flocks of up to 200,000 Greater Shearwaters.

Both species are monogamous colonial nesters, with some individuals mating for life. Both nest in burrows, but because of the high density of Greater Shearwaters at one colony, there is not enough room for every pair to have a burrow, and thousands lay their egg on the surface. They are so gregarious that they nest in burrow-denying density while ignoring apparently suitable burrow habitat on nearby uncolonized islands. The burrows are dug into tussock grass slopes and meadows, and those of the Sooty Shearwater are lined with twigs, leaves, and grass. The burrows of Greater Shearwaters may be a yard in length. During courtship Sooty Shearwater pairs will duet with loud *der-rer-ah* or *coo-roo-ah* song. Greater Shearwaters are also vocal on the breeding grounds, principally at night, with high-pitched calls and howls and rhythmic calls not unlike those of the Sooty Shearwater. As in most colonial nesting species, territoriality is restricted to defending the area immediately adjacent to the nest. Both species lay a single white egg, and incubation is shared by both parents for the 7-8 weeks until hatching. The chicks hatch with their eyes open and are covered with down (semi-altricial). Parents in both species share brooding and feeding responsibilities until fledging, which is 13-14 weeks in Sooty Shearwaters and 15-17 weeks in Greater Shearwaters. Foraging trips may cover hundreds of miles. Foraging birds return to their burrows after dark, presumably to avoid predators. Adults eventually desert the young, providing no postfledging care.

Both species have a variety of foraging techniques that include plunge-diving and “flying” under water in pursuit of prey, to depths of six feet in the case of Sooty Shearwaters and thirty feet for Greater Shearwaters. They also forage while swimming on the surface, and rafts of thousands may congregate near breeding colonies. The light-colored ventral surface of the Greater Shearwater may make it less visible to prey and thus make surface foraging more efficient. They sometimes feed with whales and follow ships, feeding on offal. Pelagic animals such as squid, fish, and crustaceans are their main source of food.

Although populations of both species number in the millions—up to eight million for the Greater Shearwater—both suffer from anthropogenic problems. The Greater Shearwater has a very restricted breeding range, which makes it vulnerable to natural disasters such as storms, and as many as 50,000 chicks and several thousand adults are harvested each year from Nightingale Island alone. The eggs and chicks of Sooty Shearwaters have also been traditionally harvested. Both species have experienced serious mortality associated with fishing industries, including drift nets, trawlers, and marine debris. In many colonies introduced mammalian predators such as rats have an adverse impact on nesting success. Fortunately, the impact of longline fisheries has been less on the shearwaters than the albatrosses that are large enough to take baited hooks and subsequently drown. Both species, like all of the tubenoses, have low fecundity, with breeding delayed until age 5-9 years, and produce a single young per year. Hence they rely on long life spans to keep populations stable, and increases in adult mortality can have disastrous effects. At present, however, neither species is globally threatened and we can hope that anthropogenic factors will not alter their status. 

*William E. Davis, Jr.*