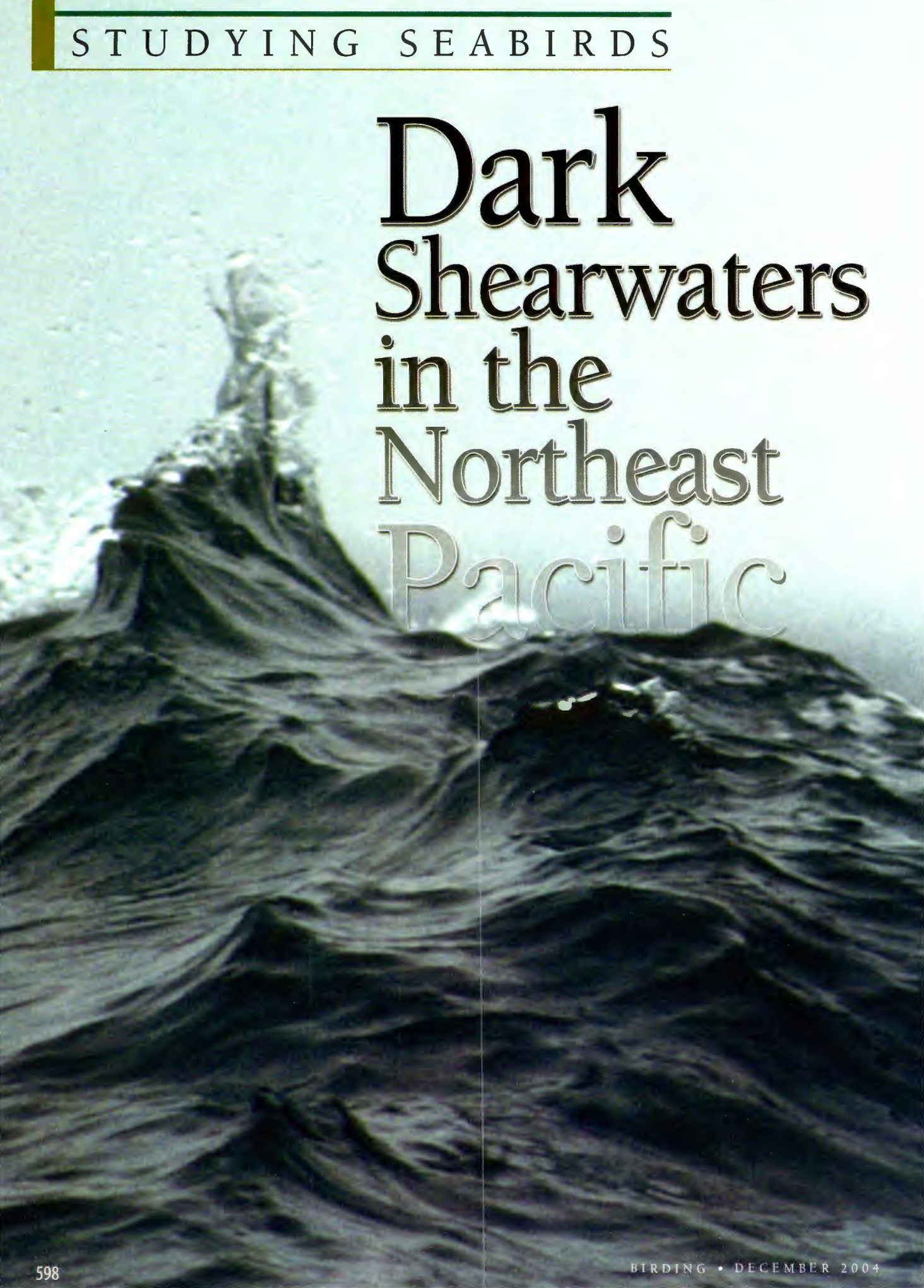
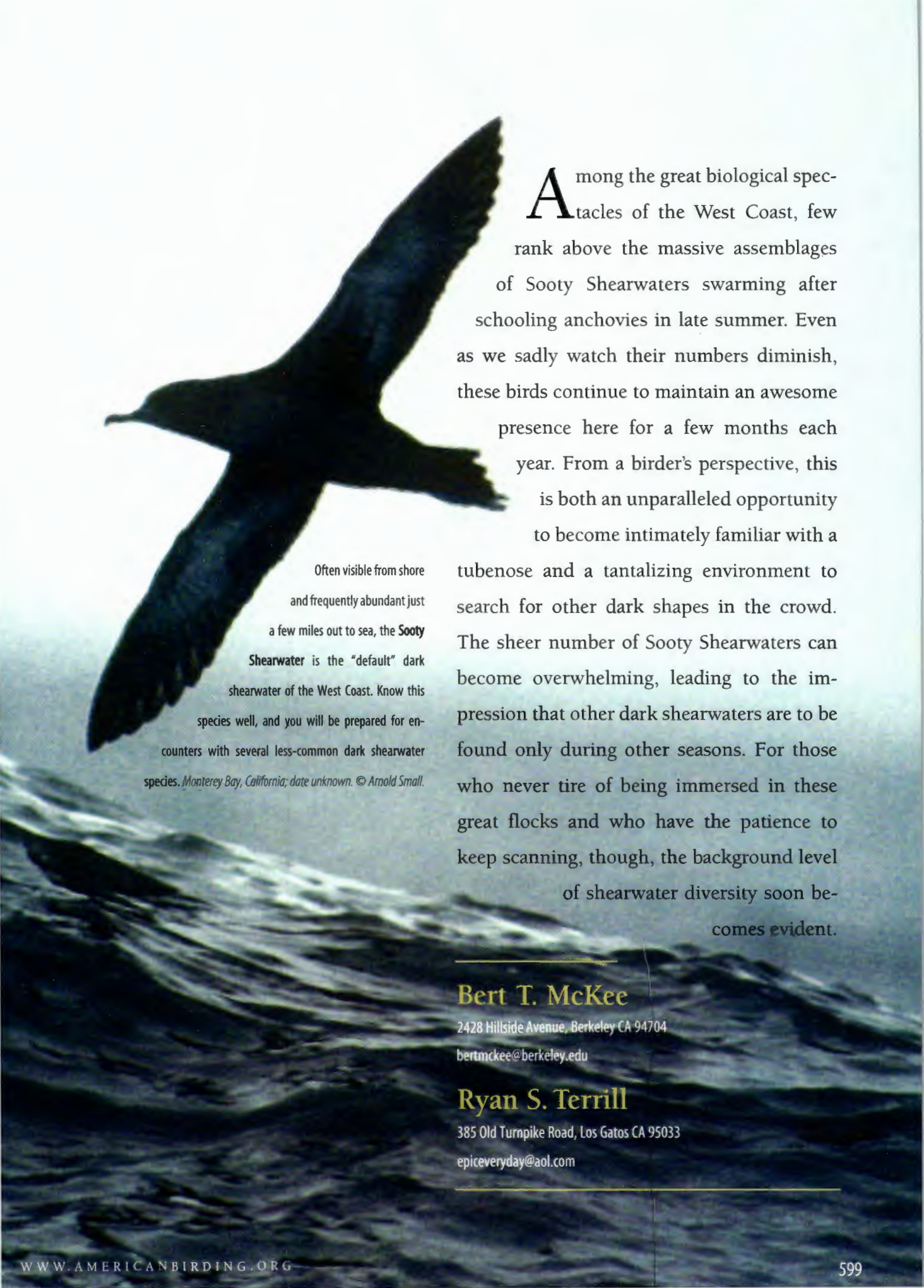
Dark Shearwaters in the Northeast Pacific





Often visible from shore and frequently abundant just a few miles out to sea, the **Sooty Shearwater** is the "default" dark shearwater of the West Coast. Know this species well, and you will be prepared for encounters with several less-common dark shearwater species. *Monterey Bay, California; date unknown. © Arnold Small.*

Among the great biological spectacles of the West Coast, few rank above the massive assemblages of Sooty Shearwaters swarming after schooling anchovies in late summer. Even as we sadly watch their numbers diminish, these birds continue to maintain an awesome presence here for a few months each year. From a birder's perspective, this is both an unparalleled opportunity to become intimately familiar with a tubenose and a tantalizing environment to search for other dark shapes in the crowd. The sheer number of Sooty Shearwaters can become overwhelming, leading to the impression that other dark shearwaters are to be found only during other seasons. For those who never tire of being immersed in these great flocks and who have the patience to keep scanning, though, the background level of shearwater diversity soon becomes evident.

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Sooty Shearwater: The Dominant Bird

In addition to being the most abundant shearwater off the West Coast of the U.S., the **Sooty** is in many ways our "most typical" shearwater. It falls right in the middle of the shearwater size-and-shape spectrum, and it exhibits the full range of gliding, soaring, and flapping behaviors shown by shearwaters. *Monterey Bay, California; 27 May 1995. © Mike Danzenbaker.*

Unless one is dealing with the congregations of Short-tailed Shearwaters in summer off Alaska, the first step is to learn the Sooty Shearwater from head to toe. This species breeds primarily on islands around New Zealand and southeastern Australia during the austral summer. The bulk of the population moves north through the central and western Pacific during our spring, arriving in the Gulf of Alaska in mid-June. Moderate numbers can be seen heading north along our West Coast in April and May. The comparatively small breeding populations of South America may contribute to this movement. The real numbers hit our coast in July and August, when seemingly endless streams of Sooties move among feeding grounds just offshore. Numbers drop off rapidly in September, and a typical day of birding off the West Coast from November through mid-April produces numbers in the low double digits.

Sooty Shearwaters are an excellent reference point in identification, owing to their fairly typical shearwater size and shape. These birds can handle all kinds of ocean conditions, and their flight style varies accordingly. During low winds, Sooties hug the surface closely, following the contours of the swells with stiff-winged glides interspersed with short bouts of stiff but strong wing-beats. As wind speed and swell size increase, flapping decreases and the birds begin to bank and arc over the waves. In high winds, Sooties can be seen arcing high above the horizon.

The blaze of white on the underwings of the **Sooty Shearwater** is a well-known field mark. But this character can vary with lighting and pigmentation, and it can be shown to varying degrees by other species. A key point to note is the contrast between the pale feathers covering the bases of the primaries and the darker primaries themselves. *Monterey Bay, California; 30 September 1999. © Mike Danzenbaker*

Although this article focuses on comparisons among the dark shearwaters, birders should be aware of possible confusion involving gadfly petrels and Northern Fulmar. On this intermediate-morph **Northern Fulmar** (photographed over the Bering Sea, believe it or not!—not in a bathtub), points to note include the large-bodied and bull-necked appearance, plus the pale bill angled down toward the water. *Bering Sea, Alaska; 16 July 2004. © Tony Leukering.*

As the bird rises above the waves, the body and wings shift from belly-down to belly-out, with the wings on a plane perpendicular to the water at the peak of the arc. In these conditions, offshore birders struggle to pick out distant rare *Pterodroma* petrels among the Sooties. But even in the highest winds, the arcing styles of *Pterodromas* are distinguishable from shearwaters. Sooties appear ever so slightly "wobbly" at the peak of the arc, when, with what looks almost like a touch of hesitance, they drop the upper wing to begin a relatively shallow descent. *Pterodroma* petrels appear to handle high winds with more confidence. At the peak of a swift, seemingly effortless ascent, the upper wing is dropped in a quick flick, and the bird plummets steeply toward the sea. In general, these petrels are much lighter on the wind, with slightly crooked wings, as opposed to the jet-like, straight-winged style of Sooties. These petrels also show more-rounded wingtips, shorter necks and bills, and broader tails; thus, they lack the front-heavy appearance of Sooty Shearwaters.

Dark-morph Northern Fulmars can be distinguished from Sooties along similar lines. Their wings are stubbier, with more-rounded tips and a stronger bend at the wrist. The neck is very thick, and the steep forehead gives the head a blocky look. In decent light, even the darkest birds are distinctly gray. The thick pale bill is generally held at an angle down toward the water, rather than straight ahead as on most shearwaters. In a variety of conditions, fulmars often exhibit the distinctive habit of remaining at the peak height of an arc for a prolonged, level glide.

One of the most characteristic aspects of Sooty shape is the heavy, cylindrical body. This species has heavier "wing-loading" than any similar species. (Wing-loading refers to the ratio of body weight to wing surface area.) The broad-based wings gradually taper to a sharp point, appearing almost conical. In high winds,

Additional Reading

Unquestionably, the best way to learn the shearwaters is to get actual experience at sea. At the same time, field experience with these species is of limited value without prior study of the published literature. Start off with the present article, plus Jon L. Dunn's 1979 overview of Sooty vs. Short-tailed (*Western Tanager*, vol. 45, no. 7, p. 9). Two readily accessible resources, with current perspectives on the dark shearwaters, are the following: (1) Angus Wilson's popular and frequently visited Ocean Wanderers web site <www.oceanwanderers.com>, with excellent photographs of many species of seabirds; and (2) the PELAGIC-L listserver <www.birdingonthe.net/mailinglists/PELA.html>, hosted by the University of Arizona, which provides a forum for the discussion of contemporary problems in the identification of seabirds. If you have access to a good library, you would do well to consult several journals that place a heavy emphasis on seabird biology, including *Marine Ornithology* (published in South Africa), *Notornis* (published in New Zealand), and *Sea Swallow* (published in the U.K.). Also, the European journals *Birding World* and *British Birds*, although generalized in their coverage, have run several important articles on seabirds in recent years and are likely to do so again in the future. Finally, here are some good general references that cover, in many instances in considerable detail, the ID challenges addressed in the present article:

Harrison, P. 1983. *Seabirds: An Identification Guide*. Houghton Mifflin, Boston. (The basic reference.)

Lindsey, T.R. 1986. *The Seabirds of Australia*. Angus and Robertson, North Ryde. (An excellent photographic reference.)

Marchant, S., and P.J. Higgins. 1990. *Handbook of Australian, New Zealand, and Antarctic Birds*, vol. 1. Oxford University Press, Melbourne. (With in-depth treatment of every species in this article.)

Murphy, R.C. 1936. *Oceanic Birds of South America*, vol. 2. Macmillan Company and the American Museum of Natural History, New York. (A still-essential reference by the great master of yesteryear.)

Stallcup, R. 1990. *Ocean Birds of the Nearshore Pacific: A Guide for the Sea-going Naturalist*. Point Reyes Bird Observatory, Stinson Beach. (Excellent treatment of the dark shearwaters, in the author's inimitable prose.)

Thanks to Jonathan Alderfer, Edward S. Brinkley, and Jon L. Dunn for contributing much of the information that appears in this sidebar.

Separating Short-tailed and Sooty Shearwaters is one of the most difficult ID challenges in the ABA Area. **Short-tailed** averages smaller and more buoyant. Compared to the Sooty, its wings are narrower at the base and less tapered, and often have a notable crook at the wrist. The contrast between light and dark areas on the underwings is less strong than on Sooty. Other points to note (see text) involve bill structure, head shape, and throat pattern. *Monterey Bay, California; 12 November 1999. © Mike Danzenbaker.*

they can be swept back at the wrist, but in general this species holds its wings notably straight. The tail is rather short, and this character is emphasized by the large head and long dark bill, which usually appears just a bit shorter than the length of the head. Many Sooties show a distinctively shallow slope to the forehead, merging smoothly into the bill. Contrary to popular belief, the feet of Sooty often extend beyond the tail tip: This feature does not necessarily indicate a Short-tailed Shearwater.

Sooty Shearwaters are variably dark brown, a little paler below, and generally show a diffuse, squarish pale area on the throat. The underwings have a distinctive blaze of silvery white across the coverts. This blaze is boldest on the primary coverts but extends clearly backward through the greater and median secondary coverts. The flight feathers and leading portion of the inner wing are dark. A key point to focus on is the pattern of contrast between the primary coverts and primaries. Because these coverts are all pale (or pale with dark shaft streaks), a sharp, rounded line of contrast is visible along the base of the primaries. The appearance of the underwings varies greatly with lighting conditions. It is not uncommon for observers to get the impression of dark underwings from birds at certain angles. In fresh plumage, both Sooty and Short-tailed show a pale reflective sheen on the secondaries, often noticeable from above.

Short-tailed Shearwater

This smaller species breeds in and around Australia in the southern summer, and then heads for the Bering Sea and Gulf of Alaska for our summer months. The summertime aggregations off the coast of Alaska can be immense, on par with the huge concentrations of Sooty Shearwaters farther south. Smaller numbers begin trickling down the West Coast in September and October, with the species often outnumbering Sooty during the winter months all along the coast. A few Short-taileds have been identified by experienced observers in California into the spring and summer, but low pelagic coverage prior to mid-summer and the difficulty of sorting through the hundreds of thousands of Sooties in late summer obscure its status.

Sooty and Short-tailed Shearwaters are very similar in plumage, and, indeed, they represent one of the most challenging ID problems for the North American birder. The most notable differences involve shape and flight style. To use these

distinctions with confidence takes some time and patience, plus an acute awareness of the way birds are responding to the conditions of the moment. In general, Short-tailed Shearwaters differ from Sooties in the same way that *Pterodromas* do, but to a much lesser degree. Our experience is that the wing-loading of Short-tailed appears lighter, giving the bird a more-buoyant look. The wings are narrow at the base, with a notable crook at the wrist, orienting the "hand" both down and back. In addition, the hand is more rounded, so that the wing as a whole maintains a fairly even thickness, rather than distinctly tapering from the base.

The bill of Short-tailed is small and thin, usually notably shorter than the head. Many birds, however, appear identical in the field to Sooty in this respect, and occasional "runt" Sooties with strikingly small bills further confound the situation. The "nail" of the bill of Sooty usually projects more noticeably upward, giving the upper mandible a more concave appearance. The forehead of Short-tailed is steep and the head is very rounded, but many Sooties have the same look. Because of the more compact head, neck, and bill, Short-tailed does not impart the notably front-heavy appearance of Sooty. As a result, it is actually less likely to appear "short-tailed"!

There are subtle differences in the pale patterning between these two species. When it is evident, the pale throat of Short-tailed is often larger and extends onto the lower cheek, resulting in a capped appearance. The pale area may extend onto the upper breast as well, but many birds appear dark throughout the entire throat area. The underwings are a very important character, but many lighting conditions can mislead the unwary birder. Short-tailed Shearwaters can have very dark underwings, but a diffuse pale grayish cast is usually evident, and it can look quite "flashy" in bright light. With a good look, the distribution of pale is generally distinguishable from that of Sooty. The

Summary of Major Identification Characters for Dark Pacific Shearwaters. Comparisons among the species listed below are examined in greater detail in the main text, and birders should be aware that many of the differences below can be affected by light and wind speed and by the flight profile of the bird.

	COLOR	UNDERWING	BILL	TAIL	JIZZ
Sooty	Dark brown; slightly paler below; usually paler on throat	Silver blaze; sharp border between primary coverts and primaries	Moderate to long; thin; dark	Short; rounded	High wing-loading; fairly straight, evenly tapered wings
Short-tailed	Similar to Sooty; sometimes very dark overall or with noticeable white throat	Variable pale sheen across coverts; generally boldest in middle of wing	Short to moderate; thin; dark	Short; rounded	Light wing-loading; narrow-based wings with rounded primaries
Flesh-footed	Very dark; chocolate	Dark with faintly paler primary bases	Large; thick; pink-based	Fairly short; rounded or slightly wedged	Large; lumbering; slow wing-beats
Wedge-tailed	Dark; cool brown; scapulars with obvious white edges	Dark with faintly paler primary bases	Moderate to long; thin; gray	Very long and tapered; wedged when spread	Light wing-loading; buoyant flight; bent wings; generally flies low to water
Christmas	Very dark; blackish brown	Dark with faintly paler primary bases	Very short; dark	Medium length; rounded wedge	Very small; narrow, rounded wings; small head and neck

brightest flash is concentrated near the center of the secondary coverts, and it gradually fades toward the edges of the wing. In particular, it fades and tapers smoothly through the primary coverts and continues into the base of the primaries, so that the rounded delineation between the coverts and remiges does not stand out as in Sooty. Of course, molt and feather wear can affect the usefulness of these marks, and birders should be aware in particular that many Short-taileds in summer are in heavy molt and especially ratty-looking. Sooty Shearwaters can molt nearly all of their underwing coverts at once and at such times appear quite dark there. Some identifications are going to be conjectural, some are impossible, and some of them even provoke fights.

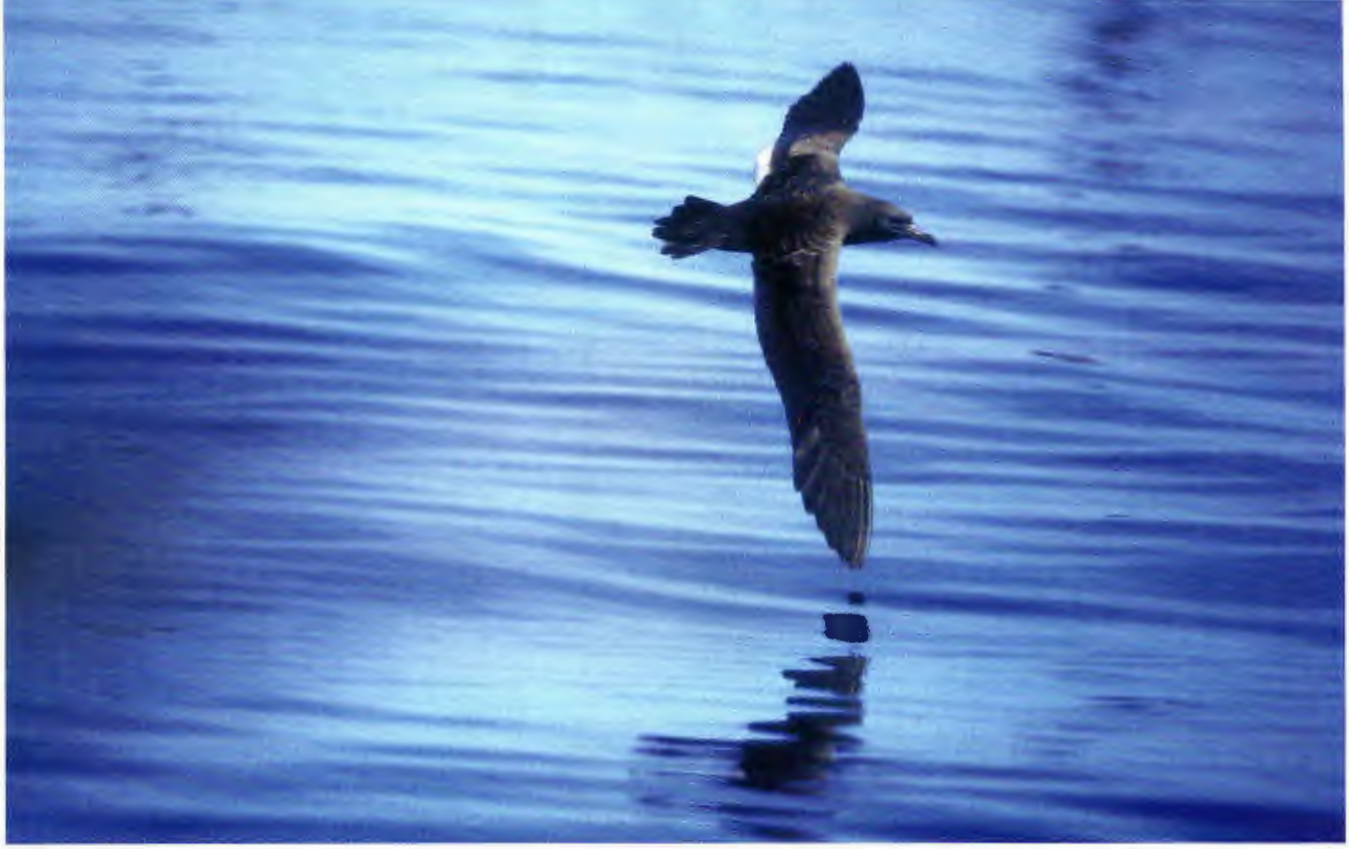
Short-tailed Shearwaters have a very strong habit of flying into the wake of boats in search of chum. Although this is a good place to start when looking for this species, Sooties often follow boats as well. Birders are often thrown off by a few hungry, ragged-looking Sooties that linger into the fall and become particularly interested in boats.

Flesh-footed Shearwater

This widespread breeder of the southwestern Pacific and eastern Indian Oceans is sparsely distributed along our coast throughout the year, with peak counts (rarely up to 10 per day) occurring in October and November. The key to recognizing it is to first become familiar with the shape and flight style of the closely-related Pink-footed Shearwater (which has been considered conspecific with Flesh-footed), which is generally whitish below. Both are obviously larger than Sooty, and their wing-beats are slower and more lumbering. Pink-footed and Flesh-footed are almost identical in shape. With practice, Flesh-footed's wings appear a touch narrower at the base, with a more distinct crook at the wrist. The head of Flesh-footed often appears slightly thinner.

Flesh-footed is a very uniform, dark chocolate brown.

In most instances, the first thing to note on Flesh-footed Shearwater is its overall dark-chocolate coloring and lumbering flight. At any distance, the underwing appears to be uniformly dark. The pink ("flesh") bill can be noticeable at a surprising distance, but a close-up view is necessary to see the pink feet. *Monterey Bay, California; October 1995. © Mike Danzenbaker.*



Most Pink-footed Shearwaters are pale below and therefore not likely to be confused with Flesh-footed Shearwater or other dark shearwaters. But this all-dark individual is apparently a **variant or aberrant Pink-footed**. Such birds may be provisionally distinguished from Flesh-footeds by their thicker heads and necks, duller bills, and broader-based and less-kinked wings. *Monterey Bay, California; 5 September 1998. © Bert T. McKee.*

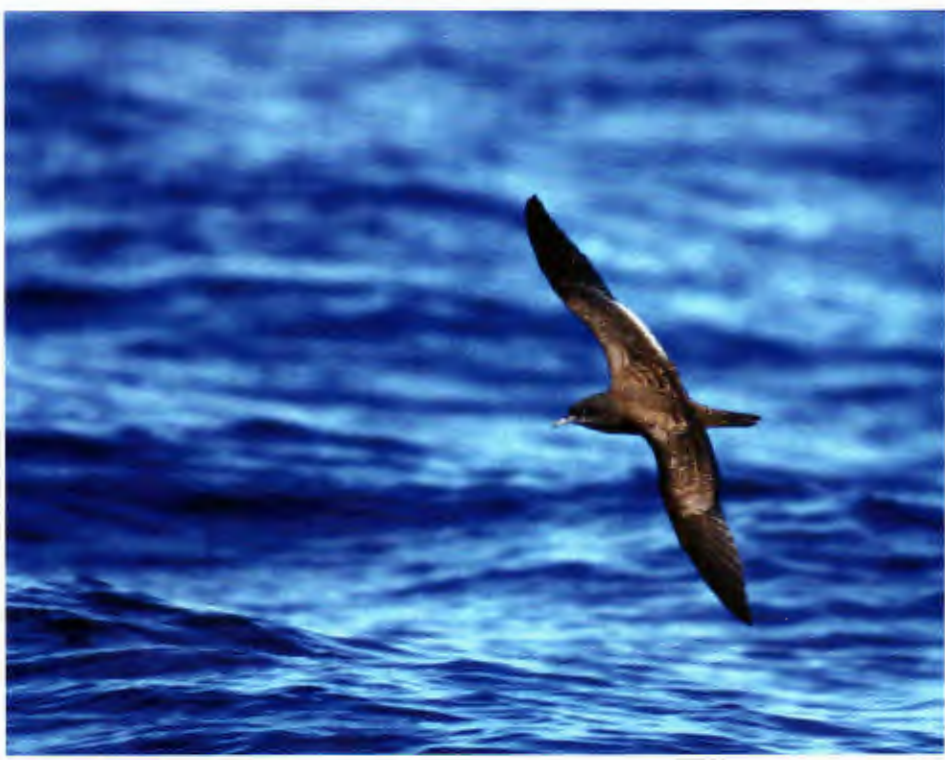
Its underwing linings are truly dark, but a faint pale flash is often visible at the base of the primaries. The flight style is easily distinguished from that of the smaller shearwaters, but when the bird is fairly close, the pink-based bill and pink feet are also obvious.

Pink-footed Shearwaters show a variable amount of dark smudging below, which is sometimes quite extensive. Almost all individuals retain white in the underwing coverts and central belly, but we have observed several apparent Pink-footeds in California that were completely dark below, and similar birds have been seen near breeding colonies in Chile (S.N.G. Howell, personal communication). These birds were distinguished, tentatively, from Flesh-footed by the colder gray-brown plumage, as well as by the shape differences described above. S. Marchant and P.J. Higgins, writing in the *Handbook of Australian, New Zealand, and Antarctic Birds*, considered the Pink-footed Shearwater polymorphic, but they were referring to individual variation in plumage, with the underparts ranging from pure-white to heavily washed with dusky. Given this variation, it is easy to imagine that occasional birds would appear wholly dark.

Farther Afield

Two dark tropical shearwaters occur in the North Pacific.

The Wedge-tailed Shearwater is widespread and com-



Key features on the dark-morph **Wedge-tailed Shearwater** (casual in the ABA Area) include its long tail and somewhat bulging secondaries. Its jizz is more similar to that of the boldly patterned Buller's Shearwater than to that of the similarly patterned Flesh-footed Shearwater. Subtle differences in plumage and bare parts are discussed in the text. *Monterey Bay, California; 25 August 1996. © Mike Danzenbaker.*

mon from Australia to Hawaii and Mexico. It has been recorded along the West Coast on rare occasion, mostly off California during the fall. Breeding populations have varying percentages of light and dark morphs, with many dark birds in Mexico but almost none in Hawaii. Our records have been split between dark and light morphs, suggesting that at least some of these birds hail from Mexico or from more-distant colonies, rather than from Hawaii.

The best approach to this species is again to first learn a more common light-bellied species, in this case the Buller's Shearwater. Both species have very light wing-loading and sparse, buoyant wingbeats; a slender body; long wings with a distinct downward crook at the wrist; and a long, pointed tail. The similarities are striking; the only notable differences in shape are the longer tail, smaller head, and longer, slightly bulging secondaries of Wedge-tailed. Another useful, although necessarily subjective, mark for Wedge-tailed is its habit of flying very close to the surface of the water. If one can first grasp the shape differences between Buller's and Pink-footed, the difference between dark Wedge-tailed and Flesh-footed should easily follow. The thin, dark gray bill of Wedge-tailed should be used for confirmation.

In plumage, dark Wedge-tailed Shearwaters are extremely similar to Flesh-footed, right down to the slightly paler bases of the primaries. Unlike Flesh-footed, even some very dark Wedge-tailed Shearwaters retain a faintly paler throat. Most shearwaters show faint pale scalloping on the scapulars and upperwing coverts in fresh plumage, but this is particularly notable on Wedge-tailed.

The second tropical species is a small bird, the **Christmas Shearwater** (*Puffinus nativitatus*), which breeds on scattered islands throughout the central tropical Pacific, including the northwestern Hawaiian islands. It is closely

From above, the **Buller's Shearwater** is strikingly patterned (see cover)—so much so that it is tempting to ID the bird quickly and then move on to something else. But it is useful to pay attention to the body proportions and flight style of this not-uncommon West Coast species, which serves as an excellent point of reference for comparisons with some of our rarer species. From below, structural points to note include the slender profile, the downward-arced wings, and the relatively long tail. *Monterey Bay, California; 12 November 1999. © Mike Danzenbaker.*

Although not yet recorded in the ABA Area, the all-dark Christmas Shearwater is something to be on the lookout for off the West Coast. The flight profile of this small, dark shearwater is reminiscent of that of the Manx Shearwater. A good mark up close is the very short, stubby bill. *Location and date unknown. © R.L. Pitman / VIREO.*

tied to the warm central Pacific water-mass and is not particularly common, so its appearance along the West Coast is not strongly anticipated. Many stranger seabirds have occurred here, however, and it is worthwhile to be prepared for almost anything.

The Christmas Shearwater might be seen as the next step along the Sooty–Short-tailed continuum toward the *Pterodroma* petrels, but it is actually closer to the small shearwaters of the Manx complex in many ways. It has short, rounded wings, quick wing-beats, and a very short, stubby bill. The tail is a broad and rounded wedge and does suggest a *Pterodroma*, especially in combination with the short head extension.

Confirmation of a Christmas Shearwater out of range would require careful examination of the underwing pattern in good light. As in Flesh-footed, the underwing coverts are truly dark, and any paleness on the underwing is restricted to the faintly reflective bases of the flight feathers. The possibility of rare melanistic Black-vented Shearwaters should be kept in mind (D. Shearwater, personal communication), but these birds are unlikely to match the uniform deep brown of Christmas.

Whether one is agonizing over distant silhouettes from land or plowing through the masses of Sooties offshore, only patience and practice will prevail in the identification of dark shearwaters. The most important way to gain skill is to pay careful attention to the way each species modifies its flight behavior in response to differing wind and wave conditions, as well as the various ways light affects subtle shades of brown and silver. After building up confidence with the common species, it is only a matter of time before your sharpened senses will snag that Wedge-tailed cutting across the bow.

Acknowledgments

Most of what we have learned about shearwaters has been the result of observations and conversations with the leaders and participants on pelagic trips off California, as well as a few ardent land-based birders. We are indebted to Debra Shearwater for making these pelagic trips possible. Peter Pyle, Steve N. G. Howell, Barry Sauppe, Ronald S. Thorn, Jon L. Dunn, Todd McGrath, and Jim Danzenbaker have engaged us in particularly lengthy and helpful discussions of these birds. We thank Jonathan Alderfer, Jon L. Dunn, and Peter Pyle for their helpful comments on an earlier version of this article.