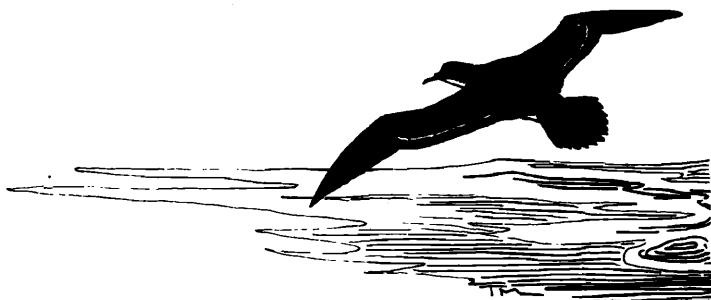


The following article is the first in a series on California rarities to be edited by Joseph Morlan and Don Roberson. It is based on materials submitted to the California Bird Records Committee (CBRC). The description and circumstances were drawn from the accounts of the observers and have been reviewed by them. Roberson prepared the distributional summary; Morlan prepared the identification summary. In this way we hope much important information accumulated in CBRC files will become widely available.



Wedge-tailed Shearwater

Sketch by Tim Manolis

## FIRST RECORD OF THE WEDGE-TAILED SHEARWATER IN CALIFORNIA

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On 31 August 1986, Stallcup was leading a pelagic trip for the Point Reyes Bird Observatory. At about 0900, he was standing at the stern of the *Sea Wolf* about 4 nautical miles due west of Point Pinos, Monterey County, when an unusual shearwater glided by, heading toward a large flock of gulls and shearwaters in the boat's wake. The bird was very close and it took him a second to realize that it was not any expected species. He shouted "What is that? What is that bird? Get onto that bird!" The shearwater melted into the flock but quickly reappeared about 40 feet behind the boat. Its unique shape, dark bill, pink feet, and nearly uniform dark brown upperparts suggested a Wedge-tailed Shearwater *Puffinus pacificus*, a species Stallcup had seen off western Mexico and southeastern Australia.

All 20 other observers clustered at the stern, many struggling to see details as Stallcup yelled out "What's the precise underwing pattern? Is the bill all dark? Who has a camera?" Then he remembered his own camera and was soon photographing the shearwater, guessing at the proper exposure, until he ran out of film. He obtained 17 photos (including Figures 1-3); Alan K. Thomas obtained one more (Figure 4). Fortunately the bird was very cooperative, staying in the wake for an estimated 10-12 minutes. It was often the bird closest (30-50 feet) to the ship but sometimes drifted back or landed

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on the water. It flew outside the flock, up one side or the other, crisscrossing and quartering and dropping on tidbits of chum. The quartering maneuvers provided excellent views of the spread tail and often of the dangling legs and feet.

Stallcup obtained LORAN readings from the captain (placing the bird at 36° 38' 16 N, 122° 04' 27 W) and radioed another boat of birdwatchers about 35 miles west. This second group of observers scoured the area later that day, as did another chartered boat the following day, but the bird was not relocated.

Stallcup took the following description, compiled from field notes and with reference to the photographs:

A shearwater most like Buller's *P. bulleri* in size and shape but with a tail half again as long, much wider, and more flamboyant. The wings appeared long and slim in most views, but were wide, especially from the wrist inward (suggesting long secondaries?). The body was slimmer than that of the Pink-footed Shearwater *P. creatopus*, being more like Buller's in proportions, including those of the head and bill. The flight was extremely graceful, like Buller's, with effortless flapping broken by sustained gliding on bowed wings. The flaps were smooth, unlike the more labored flight of the Pink-footed, and this bird used the lift from the waves more efficiently. It usually stayed less than 3 feet from the surface, but occasionally wheeled up to perhaps 20 feet. When competing for chum it displayed three notable behavioral characteristics: (1) it blatantly used its large tail to outmaneuver even the agile Heermann's Gulls *Larus heermanni*, quartering with its body to drop onto floating food items, reminding one of a harrier *Circus*, (2) it often foraged with its legs and feet hanging down, and (3) it sometimes pulled its head back a bit, giving an "Adam's apple" effect to its long neck.

The entire upperparts were dark without noticeable markings. The remiges and retrices were black above and below. The crown, face, nape and a large peninsular smudge projecting onto the side of the breast were blackish, merging with little contrast into the ebony brown back and upperwing coverts. The tips of some coverts (probably greater coverts) were paler (worn or pale-tipped?), forming a barely noticeable tan stripe near the trailing edge of the upperwing.

The chin, throat, breast, sides, belly, and flanks were pure white, but the demarcation from the dark upperparts was rather fuzzy. The undertail coverts and lower flanks were dark.

The underwing coverts were mostly white, separated from the white body by blackish axillars. The entire trailing third of the underwing, made up of the remiges, was dark, as was a narrow strip on the leading edge, only slightly wider than that of Buller's Shearwater. A dark diagonal line, from just inside the wrist on the leading edge to the posterior axillaries, isolated a small triangle of white on the underwing coverts, producing a field character apparently unique to the light morph of this species.

The bill appeared dark in the field, but was subtly black-tipped on the distal quarter and darkest blue-gray on the remaining basal portion. Eyes appeared dark. Legs and feet were pink, recalling those of Pink-footed Shearwater.

At Stallcup's suggestion, Ruben Balzer, Bill Manolis, Nancy Menken, Susan Peaslee, Alan Thomas, William Ure, and Katherine Wilson submitted additional descriptions. These were similar in most respects to Stallcup's, although Manolis described the back as "chocolate brown" and the feet as "flesh-colored."

The record was unanimously accepted by the California Bird Records Committee on the first circulation (Bevier in prep.). It constitutes the first record for California and for North America north of Mexico.

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Figure 1. Wedge-tailed Shearwater, Monterey Bay, 31 August 1986. Note outline of white triangle on underwing coverts and long wedge-shaped tail.

*Photo by Richard Stallcup*



Figure 2. Wedge-tailed Shearwater, Monterey Bay, 31 August 1986. Note narrow pale tips to greater coverts forming a narrow wing stripe.

*Photo by Richard Stallcup*

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Figure 3. Wedge-tailed Shearwater, Monterey Bay, 31 August 1986. Note the long, thin gray bill with slightly darker tip and black flight feathers contrasting with white wing linings.

*Photo by Richard Stallcup*



Figure 4. Wedge-tailed Shearwater, Monterey Bay, 31 August 1986. The head is pulled back, producing an "Adam's apple" effect, and the long secondaries give a distinctive broad-based appearance to the wings.

*Photo by Alan K. Thomas*

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### DISTRIBUTIONAL SUMMARY

The Wedge-tailed Shearwater ranges widely throughout the tropical Pacific and Indian oceans. It occurs in the eastern Pacific from Baja California (A.O.U. 1983) to Ecuador and throughout the central and western Pacific, north to Japan and south to southern Australia and New Zealand. It occurs in the Indian Ocean from western Australia to southern Africa and north to the northern Red Sea (Jouanin and Mougín 1979, Sinclair 1978, Shirihai 1987). All breeding colonies are on tropical or subtropical islands.

Pacific populations of this polymorphic species consist predominately of the light morph in the north (except at the Marianas and Revillagigedos) and the dark morph in the south (except at Sharks Bay, western Australia, where 20-30% of the birds are light; Blakers et al 1984), with 10° N latitude representing an approximate dividing line (King 1974). The breeding colonies nearest California are on San Benedicto Island, in the Revillagigedo group off southern Mexico, and in the Hawaiian Islands. The San Benedicto breeding population was two-thirds dark in 1898 but was nearly all dark by 1974 (Jehl and Parkes 1982). However, sightings at sea near the Central American coast (east of 120° W) are predominately of the light morph, with dark birds becoming more numerous only far offshore (between 120 and 150° W; Pitman 1986).

The Hawaiian population is estimated at 1.5 million birds (Haley 1984), and 97% of the birds around the main islands are of the light morph (Berger 1981). They nest from March to November, then move south to the Equatorial Countercurrent and east to waters off Central America, completing a molt prior to returning to their breeding colonies (Berger 1981, King 1974). A vagrant from this long migration route might account for the bird reaching Monterey during fall, as most other populations are nonmigratory (Jouanin and Mougín 1979) and most southern populations are dark. Large flocks usually remain near the Hawaiian breeding grounds until November, so this bird may have been a nonbreeder.

The bird was not associated with any storm or sea-temperature fluctuation (e.g., "El Niño"). Seas in the vicinity were calm with a three-foot ground swell; the weather was calm and overcast. King (1974) found the Wedge-tailed Shearwater insensitive to water temperature, as long as the temperature was above 21° C (70° F), and found it only slightly sensitive to salinity, preferring salinities above 34.6 parts per thousand. However, he cited two records from waters of 15° C (59° F), showing that the species is not entirely restricted to warm water. On 31 August 1986 the surface temperature at Hopkins Marine Station, Pacific Grove, 8 miles east inside Monterey Bay, was only 13.5° C (56.3° F) and temperatures off Point Pinos average even cooler (A. Baldrige pers. comm.). At Granite Canyon, about 15 miles south of the sighting, the temperature was 11.7° C (53.1° F; Scripps Institute of Oceanography 1987). Thus the water temperature where the shearwater was seen was probably no higher than 12° C. Sea temperatures in the Monterey Bay region were 2-4° C warmer at the beginning of August (Scripps Institute of Oceanography 1987) but had cooled by the end of the month.

The previous records nearest California were sightings of both light and dark birds 16 December 1956 off northern Baja California, Mexico (Murphy

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1958), less than a day's cruise south of San Diego. The species is more regular off Cape San Lucas at the southern tip of Baja at about 21–22° N (Pitman 1986, Loomis 1918), nearly 500 nautical miles farther south. The northernmost previous records were of birds at 35° 26' N in the central Pacific (King 1974) and a typhoon-blown dark bird at about 37° N at Toyama, Japan (Ornithol. Soc. Japan 1974). Though the occurrence off Monterey surprised many, Stallcup had previously predicted that the Wedge-tailed Shearwater would reach California (Jehl 1980).

### IDENTIFICATION SUMMARY

The Wedge-tailed Shearwater is most like Buller's Shearwater in shape and actions; Jouanin and Mougin (1979) considered the two to constitute the subgenus *Thyellodroma*, characterized by a long, graduated tail (Stejneger 1888). Both often fly low with wings angled forward, using graceful wing strokes or relaxed glides on bowed wings, quite unlike the energetic wingbeats and stiff wings of Pink-footed and Flesh-footed *P. carneipes* shearwaters. In all plumages the very long pointed tail, appearing wedge-shaped when fanned, distinguishes the Wedge-tailed from most similar species. Although many field guides de-emphasize this character, we believe it is critical in establishing a claim for this species outside its normal range. When a Wedge-tailed Shearwater sits on the water, its tail projects beyond its folded wings (Ridgely 1976). The broad bases to the wings also impart a distinctive shape.

In plumage, the light morph is similar to the Pink-footed Shearwater, as it lacks the striking back and head pattern of Buller's Shearwater. The underparts are also similar to the Pink-footed's, showing dark undertail coverts and broad dark trailing edges to the wings, unlike Buller's. Light-morph Wedge-taileds are rather variable in the extent of dark on the axillaries and underwing but average whiter there than most Pink-footeds. Wedge-taileds have a dark diagonal line extending from the axillars toward the wrist, forming the outline of a white triangle on the underwing coverts, though the pattern is less obvious on some birds. On all Pink-footeds these coverts are heavily streaked or mottled with brown, resulting in a darker overall pattern and no triangle effect.

The bill of the Wedge-tailed is variably gray with a slightly darker tip (Harrison 1983) or "reddish-flesh" (Alexander 1954) or pinkish (Ridgely 1976). We do not know how many birds have reddish or pinkish bills, but of the thousands of Wedge-tailed Shearwaters P. Unitt (pers. comm.) saw in the central and eastern Pacific, none had a pink bill. Specimens examined by Roberson at the American Museum of Natural History with original bill color noted were variously designated as slate, gray, blue-gray, and slate with pinkish tinge. Any individual with a gray bill is not a Pink-footed or Flesh-footed shearwater.

The dark morph of Wedge-tailed Shearwater could be confused with Flesh-footed, Sooty *P. griseus*, Short-tailed *P. tenuirostris*, or Christmas *P. nativitatis* shearwaters, but the former's very long pointed tail, angled wings, and buoyant flight should be diagnostic in reasonable views. Sooty and Short-tailed shearwaters are easily distinguished by their much paler underwings and very different shape and flight characteristics. The Christmas Shearwater resembles a small dark Wedge-tailed Shearwater but has a short tail and a slow, zig-zag

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flight (Meeth and Meeth 1979). Harrison (1983) claimed that dark Wedge-taileds have solidly dark underwings while Flesh-footeds have paler undersides to the primaries, but no such difference is apparent in the photos published by Harrison (1987) nor have we noted it in the field. In reality, dark Wedge-taileds are highly variable. Birds of more southerly populations tend to be uniformly dark, while more northerly birds usually have the entire underparts paler neutral gray (Murphy 1951, King 1967). For convenience, we call the latter plumage the "gray morph." Gray birds intergrade with light birds in the North Pacific, although typical birds greatly outnumber intermediates in collections (Jehl and Parkes 1982). Morlan's examination of specimens at the California Academy of Sciences suggests that intermediate birds may be categorized into two basic types: a gray morph with a white throat and a light morph with a gray band across the breast.

Dark Wedge-tailed Shearwaters are most likely to be confused with the smaller, poorly known Jouanin's Petrel *Bulweria fallax* of the northern Indian Ocean. That species' range at sea is largely unknown, although it has been collected in Hawaii (Clapp 1971), and there is a specimen from Italy whose provenance is disputed (van den Berg 1987). Apparently Jouanin's Petrel was overlooked until first discovered in the Arabian Sea in 1955 because it was confused with Wedge-tailed Shearwater (Jouanin 1955, Gallagher and Woodcock 1980). It closely resembles dark Wedge-tailed Shearwaters in coloration and in its long pointed tail. It differs primarily in its smaller size, much shorter and thicker bill, which in flight is held downward at 45° (van den Berg 1987), and a faint pale area around the base of the bill (Harrison 1987).

The feet of the Wedge-tailed Shearwater are usually pink, but the outer toe and web and the outside of the tarsus are dark (Penny 1974). In the hand all Wedge-taileds, including unfeathered chicks, are said to be reliably distinguished from all similar species by their white toe-nails (Slater 1970). This fine point is unlikely to be of value in the field, but might help establish the identity of a decomposed corpse should one wash ashore.

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