

OCCURRENCE OF BRIDLED AND GRAY-BACKED TERNS IN AMERICAN SAMOA

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ABSTRACT: In the central Pacific, the Bridled Tern (*Sterna anaethetus*) and the Gray-backed Tern (*S. lunata*) are best distinguished by the pattern of the undersides of their primaries, largely white in the Gray-backed, contrastingly dark in the Bridled. In American Samoa, where the species' ranges overlap, their similarity in plumage may have led to confusion in early records of both species. During seabird surveys around Tutuila, American Samoa, in December 2003, I confirmed the presence of the Bridled Tern. I also review past sightings of the Gray-backed Tern in American Samoa.

The Gray-backed Tern (*Sterna lunata*) is endemic to the tropical and subtropical Pacific from the Northern Mariana Islands east to the Northwestern Hawaiian Islands and south through the Phoenix and Line Islands to the Tuamotu Islands (Clapp and Hatch 1986, Kessler 2003). The species also has been found at Easter Island and in the Marshall Islands, Society Islands, and Moluccas (Enticott and Tipling 1997). The world's breeding population of the Gray-backed Tern is estimated at 70,000 pairs, but the total population may be twice that size (Mostello et al. 2000). Very little is known about its migratory behavior.

The Bridled Tern (*S. anaethetus*) is a pantropical species with disjunct populations classified among four subspecies (Cramp 1983). Its world population probably exceeds 200,000 pairs, with a stronghold in the Persian Gulf, where 130,000 pairs may breed. The species is also found in Africa, India, Central America, northern South America, and West Indies. In the United States it occurs locally off the Florida Keys, regularly in summer in the Gulf of Mexico, and in the Gulf Stream north to North Carolina, rarely to New Jersey and, after tropical storms, to New England (del Hoyo et al. 1996). Vagrants have been reported from California, but it was not until 1998 that the first state record was accepted (Erickson and Hamilton 2001).

In the western Pacific the Bridled Tern occurs locally in Australia, Japan, the Philippines, China, and in the Pescadores, Ryukyu, and possibly the Senkaku Islands of Japan (Mostello et al. 2000). It is not known if the more northerly populations of the Bridled Tern in the western Pacific are migratory or where they spend the nonbreeding season (Clapp et al. 1993). In the tropical Pacific, the species is a common to abundant resident of Palau in western Micronesia; it is accidental at Bikar in the Marshall Islands in central Micronesia (Pratt et al. 1987). It also breeds in Fiji and New Caledonia (Bretagnolle and Benoit 1997). The Gray-backed Tern replaces the Bridled Tern in the central tropical Pacific (Mostello et al. 2000).

STATUS IN SAMOA

In American Samoa, the Gray-backed Tern breeds uncommonly. Amerson et al. (1982) reported 8 to 10 Gray-backed Terns in Fagatele Bay, Tutuila, on 17 February 1976. They reported about 100 birds seen in Larsen Bay in

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March and July 1976 and that “their behavior suggested they were nesting there.” In July 2000, P. O’Connor reported tens of Gray-backed Terns from various boat and shore surveys of Fagatele and Larsen bays in southwest Tutuila (O’Connor and Rauzon 2004). Gray-backed Terns have also been reported breeding at Annu’u Island, adjacent to Tutuila, and Rose Atoll, about 150 miles from Tutuila.

Until recently, the Bridled Tern was recorded around Samoa only as a vagrant at sea. Amerson et al. (1982) noted one record, one collection, and several sightings with no details. Grant and Trail (1993) reported the species from Pago Pago harbor and observed two pairs landing on ledges of the Pola (or Cockscomb), a conspicuous rocky promontory in the Tutuila unit of the National Park of American Samoa, but did not confirm breeding.

In 1996 and 1997, Bridled Terns were reported breeding on ‘Upolu, Western Samoa, in three colonies (Tarburton 2001). Bridled Terns were also thought to be present in American Samoa in 2000, when P. O’Connor and J. Seamon (pers. comm.) made several sightings of “new” terns on trips to the Pola.

In December 2002, while conducting a seabird survey of Tutuila, I photographed Bridled Terns and estimated approximately 50 present at the Pola. At first I thought these birds were Gray-backed Terns because the only vocalizations I heard clearly sounded like the “churr” call of that species (Mostello et al. 2000). I photographed the terns in the harsh midday light (Figure 1) and clearly saw their dark backs. Later, from land, I saw Bridled Terns when the afternoon light was muted. Flying between the Pola and the



Figure 1. Bridled Terns (*Sterna anaethetus*) at the Pola, Tutuila, American Samoa, December 2003. Note the dark underside of the primaries, white forehead, and dark mantle.

Photo by Mark J. Rauzon

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mainland were a pair of Bridled Terns; one chased a Brown Noddy (*Anous stolidus*), then landed on a cleft on the seawall on which grass grew. The tern slowly moved around it, and I saw the darker brown head, back, and wings, and noted that the bird's upright posture was like that of a Sooty Tern (*S. fuscata*), not angled and low like that of a Gray-backed Tern. This is a lesser-used but important field mark of the Gray-backed Tern (Pratt et al. 1987). I also saw another Bridled Tern flying along the shoreline of the island of Ta'u, about 70 miles from Tutuila, on 16 December 2002. In subsequent and extensive seabird surveys of Tutuila in September 2003 and on a brief visit in April 2004, I saw neither Bridled nor Gray-backed Terns.

IDENTIFICATION

There has always been confusion about the distributions in the central Pacific of the Bridled and Gray-backed Terns. Several authors have suspected that published records of the Bridled Tern from Hawaii, Samoa, Tonga, and Fiji may be based on confusion with the Gray-backed Tern (Pratt et al. 1987, Haney 1999). Identification challenges for observers trying to distinguish between the two species depend on whether a bird is viewed from below or above and on the harshness of sunlight (McKee and Erickson 2002). Distinguishing shades of brown and gray under a midday sun that lightens dark tones and darkens light tones can be difficult. To further complicate identification, there may be variation in the shade of brown of the upperparts in the western Pacific subspecies of the Bridled Tern, and nonbreeding adults



Figure 2: Gray-backed Tern (*Sterna lunata*) at Jarvis Island, April 1990. Note the reduced black visible on the primaries from under the wing but the darker upper surface of the primaries.

Photo by Mark J. Rauzon

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may be paler than breeding adults (Haney et al. 1999).

The Bridled Tern, also known as the Brown-winged Tern, has brownish-black upperparts and tail (Endicott and Tipling 1997). Its upperwing is brown, darker on primaries and secondaries (Figure 1). However, heavily worn Gray-backed Terns at the beginning of prebasic molt also have a darker brownish cast on their outer secondary coverts (McKee and Erickson 2002), but the inner coverts and back remain medium gray, unlike the brownish gray back of the Bridled Tern (Figure 2). Gray-backed Terns have a distinct contrast between gray tertials and blackish primaries that is less obvious than on Bridled Terns. Gray-backed Terns also have less white in the outer rectrices than do Bridled Terns, but the amount of white also differs among subspecies of the Bridled (del Hoyo et al. 1996). Yet the outer rectrices have been used to distinguish between the Gray-backed Tern and North American races of the Bridled Tern in California (Erickson and Hamilton 2001).

Because determining dorsal coloration is problematic for terns flying overhead and the amount of white in the rectrices varies according to subspecies and molt, a diagnostic field mark more reliable than rectrix pattern is the extent to which the dark primaries contrast with the white underwings (Figure 3). Haney et al. (1999) noted that the Bridled Tern has white underwing coverts that contrast with the dark remiges, forming a dark border on the trailing edge of the wing and a wedge toward the wingtip. The darker underwing of the Bridled Tern thus differs from the mainly white underwing and brighter primaries of the Gray-backed Tern (Figure 4).



Figure 3. Bridled Tern at Kaba Point, Viti Levu, Fiji, 27 September 2003. Note the dark primaries as seen from below.

Photo by K. Vang and W. Dabrowka/Bird Explorers

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Figure 4. Gray-backed Tern, Wake Atoll, November 2004.

Photo by David Boyle

In summary, I used underwing pattern and dorsal coloration to confirm the presence of the Bridled Tern in American Samoa in 2002. Breeding in American Samoa remains unconfirmed, but because the species has bred elsewhere in the Samoan Archipelago, it may be expanding its range into the national park. The Gray-backed Tern also occurs and may be outnumbered by the Bridled Tern in December.

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