

# A Streaked Shearwater (*Calonectris leucomelas*) record for Wyoming

DOUG FAULKNER • DEPARTMENT OF ZOOLOGY AND PHYSIOLOGY • UNIVERSITY OF WYOMING • LARAMIE, WYOMING • (EMAIL: [dfaulk@uwyo.edu](mailto:dfaulk@uwyo.edu))

## Abstract

This paper examines the discovery of a Streaked Shearwater (*Calonectris leucomelas*) carcass near Medicine Bow, Wyoming, on 13 June 2006 and criteria for its identification. The larger context for this record—in particular, other records of pelagic bird species from the western interior United States and their displacement by weather features—is also considered herein.

## Field encounter

On 13 June 2006, Frank Mauer and Marji Patz (USDA–NRCS) were on a field review on the Cassidy River Ranch, Albany County (41.99° N, 106.08° W), northeast of Medicine Bow, Wyoming, when Mauer observed a bird carcass on the muddy shore of a small reser-

voir away from the water's edge. Mauer quickly recognized the bird's features (e.g., naricornes) as indicating an oceanic species and thus its importance as a species uncharacteristic of Wyoming. Later that day, Patz stored the carcass in a freezer for delivery to Bob Lanka (Wyoming Game and Fish Department), who subsequently contacted David McDonald (University of Wyoming) to ask

## Identification

his opinion on the identification. McDonald took photographs of the carcass (Figures 1-4) and forwarded them to the author for an additional opinion.

The bird can be readily identified as a member of the seabird order Procellariiformes by the naricornes at the base of the maxilla (Figure 1); these are structures that encase the nostrils and are used in diverting salt excreted from the salt glands away from the bird's face (and probably in olfaction as well). The bill is also composed of multiple plates, rather than as a single piece, typical of procellariiforms. Fused naricornes are found in the families Procellariidae (shearwaters and petrels) and Hydrobatidae (storm-petrels); the latter

plumage, Figure 1 clearly shows these features. Similar Pacific shearwaters could include Buller's (*Puffinus bulleri*), Wedge-tailed (*P. pacificus*), and Pink-footed (*P. creatopus*). Buller's Shearwater is easily eliminated by the lack of boldly patterned upperwings (Figure 2). Additionally, Buller's shows a dark bill and clean white underwing primary coverts, whereas the Wyoming bird has a light-colored bill and dark underwing primary coverts. These latter attributes also help eliminate Wedge-tailed Shearwater. In addition to bill color and underwing primary pattern, light-morph Wedge-tailed Shearwater can be ruled out based on the long, white undertail coverts, which extend well beyond the feet (never so in Wedge-tailed). Examination of the Wyoming bird showed that the legs were nearly fully extended (Figure 3). The

lightest Pink-footed Shearwaters could appear rather similar to Streaked Shearwater, particularly individuals with abnormally pale faces or napes. Pink-footed also shares the attributes of a light-colored bill and pink legs with the Wyoming bird (Figure 4). Furthermore, Pink-footed has extensive dark pigmentation in underwing coverts, although usually this is more extensive than in Streaked. However, in contrast to the Wyoming bird (Figure 3), Pink-footed has dark undertail coverts and a shorter tail, so that the legs extend to nearly the tail tip. The size of the specimen rules out the larger Cory's Shearwater (*Calonectris diomedea*) of the Atlantic, and while the recently split Cape Verde Shearwater (*C. edwardsii*) is similar in size to the Wyoming specimen, it is darker above and lacks pale plumage in the head and nape.

## Discussion

How this Streaked Shearwater arrived in Wyoming remains a mystery. The natural occurrence of this species inland has been debated previously (California Bird Records Committee, in prep.), but it is inconceiv-



Figure 1. Streaked Shearwater carcass found in Albany County near Medicine Bow, Carbon County, Wyoming, on 13 June 2006. Note the white facial aspect and extensive streaking on the crown and nape, all typical of this species and not present in other shearwaters, although rare leucistic individuals of other species may show somewhat similar patterns. Photograph by David McDonald.

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can be ruled out by the bird's body length as compared to the length of a standard sheet of paper (27.9 cm; Figures 2, 3), which exceeds that of all storm-petrels.

According to Harrison (1985), the only procellariid with a combination of white facial aspect and streaked hindcrown and nape is Streaked Shearwater (*Calonectris leucomelas*). Despite the poor condition of this bird's

able, if implausible, that this bird arrived in Wyoming with human assistance. Streaked Shearwater, a species of the western North Pacific, is considered a fall vagrant along the North American Pacific coast, with the majority of accepted records (13) from California and all North American records from the period 5 August–9 October, including one inland at Red Bluff, California 5 August 1993, about 1360 km from the Wyoming location (Marshall et al. 2003; Garrett and Singer 1998). The actual date of the bird's occurrence in Wyoming, however, appears to have been within a week of discovery. A necropsy of the carcass found the viscera still moist and maggot-ridden—a condition that could apply only if it was recently deceased. The bird was clearly emaciated and had succumbed to starvation, as no visceral fat was evident, the pectoral muscles were atrophied, and there was no evidence of external trauma. In addition, neither the esophagus nor stomach had any contents (Cynthia Tate, pers. comm.).

Records of pelagic species in the interior West (defined here as North Dakota, South Dakota, Nebraska, Kansas, Colorado, Utah, Wyoming, Montana, and Idaho) are few, particularly in the summer season. All of these states but North Dakota have autumn records of Ancient Murrelet (*Synthliboramphus antiquus*), and Colorado and Wyoming have autumn records of Long-billed Murrelet (*Brachyramphus perdix*) (Sibley 2000). Wyoming has a summer record of Lesser Frigatebird (*Fregata ariel*; 11 July 2003; see article, this issue), Montana a late-spring record of Manx Shearwater (*Puffinus puffinus*; 30 May 2004; Trochlell 2004), and North Dakota a summer record of South Polar Skua (*Stercorarius maccormicki*; 13 July 1989; Berkey 1989). Colorado, Kansas, and Utah have one or more records of Magnificent Frigatebird (*F. magnificens*), mostly from the warmer months, as does Oklahoma and as do most interior states farther east (Sibley 2000). Oklahoma also has a record of a Great Frigatebird (*F. minor*; 3 November 1975; Heller and Barclay 1977). Some of the frigatebird records, but by no means all, can be tied to discrete weather events such as tropical storms; the absence of clear evidence linking the records of the skua and the shearwaters to storm systems suggests that other factors may have resulted in their disorientation. It is conceivable that off-course birds such as these travel along major waterways like the Colorado, Columbia, or Mississippi River systems, for instance, or that they simply have faulty navigational systems.



Figure 2. Streaked Shearwater carcass found in Albany County near Medicine Bow, Carbon County, Wyoming, on 13 June 2006. The fairly uniform upperparts help to rule out similar Pacific shearwater species, particularly Buller's Shearwater. Photograph by David McDonald.



Figure 3. Streaked Shearwater carcass found in Albany County near Medicine Bow, Carbon County, Wyoming, on 13 June 2006. The facial streaking is better evident in this photograph than in Figure 1. The dark primary coverts and long, white undertail coverts extending beyond the feet eliminate Pink-footed and Wedge-tailed Shearwaters. Photograph by David McDonald.



Figure 4. Streaked Shearwater carcass found in Albany County near Medicine Bow, Carbon County, Wyoming, on 13 June 2006. Along with some plumage features, the bird's pink legs superficially suggest Pink-footed Shearwater. Photograph by David McDonald.

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