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REVISITING AN OLD QUESTION: HOW MANY SPECIES OF SKUA OCCUR IN THE NORTH PACIFIC?

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The taxonomy, identification, and distribution of skuas (currently genus *Stercorarius* but formerly *Catharacta*, AOU 2000) have long been, and continue to be, the subject of debate and uncertainty. Most authors now recognize six taxa constituting four species: the Great Skua (*Stercorarius skua*), breeding in the North Atlantic; the Chilean Skua (*S. chilensis*), breeding around southern South America; the South Polar Skua (*S. maccormicki*), breeding around Antarctica; and the Brown Skua (*S. antarctica*, with subspecies *antarctica*, *lonnbergi*, and *hamiltoni*), breeding widely on islands in the southern oceans (Malling Olsen and Larsson 1997).

Although it is now believed that skuas off the Pacific coast of North America are, by default, South Polar Skuas, this "conventional wisdom" is relatively recent. For example, the fifth edition of the American Ornithologists' Union *Check-list of North American Birds* (1957) listed three taxa of skua from the Pacific coast of North America: *chilensis*, *antarctica*, and *lonnbergi*— that is, almost all skuas except the South Polar! Identification difficulties and potential mislabeling of old specimens (Lee 1993) caused this confusion. It was not until a critical study by Devillers (1977) that the South Polar Skua was recognized as a component of the North American avifauna, and the other three southern taxa were removed from the North American list. The South Polar Skua is now known to be a long-distance, transequatorial migrant in both the Atlantic and Pacific oceans (Devillers 1977, Furness 1987).

Devillers (1977) summarized the skuas' identification characters primarily on the basis of specimens of adult birds, which generally show distinct species-specific plumage differences. Immature plumages of skuas vary considerably, however, and many taxa look similar; identification criteria for immatures are poorly known because for their first two or more years of life the birds remain at sea, where they range widely and are difficult to study. Hybridization between some taxa (notably the South Polar Skua and Brown Skua in the Antarctic Peninsula region; Parmelee 1988) adds another dimension of complexity. Any clear understanding of identification criteria—and species' distributions—will need to address these issues.

Recently, I summarized occurrence patterns and molt strategies of presumed South Polar Skuas off California and outlined plumage variation in these birds (Howell 2004). Almost all California skua records lie between April and October, with a peak from August to October when the birds are migrating south. Most skuas off California appear to molt on a schedule like that of adults, with primary molt completing in September and October (presumably having started in May and June elsewhere in the North Pacific). About 20% of birds appear to be juveniles, which start their first primary molt between mid July and mid September and probably complete it sometime between December and February. Most California skuas do resemble South Polar Skuas: they have relatively narrow wings and small bills, and their plumage is cold-toned and relatively uniform on the head and body. Many birds molting on the adult schedule are strikingly dark brown overall with limited pale buff mottling on the hindneck, perhaps an immature plumage of two- or three-year-olds (Howell 2004). However, one bird at Cordell Bank, off Sonoma County, discussed by Howell (2004; plates 9–11), looked atypically broad winged and bulky, with a very stout bill, all features more suggestive of the Brown Skua. The photos do not allow the bird to be

positively identified as a Brown Skua, given our present limited knowledge, but they do show a bird not typical of the South Polar Skua.

On 21 August 2004, I noted another skua not typical of the South Polar about 5 miles off Fort Bragg, Mendocino County, California. The bird flushed off the sea and flew across the bow of our boat, within 100 m, and was soon lost to view. Matthew Matthiessen was able to obtain a few digital images of the bird before it disappeared (back cover, upper). This bird immediately stood out as something different from over 100 South Polar Skuas I have seen off California: the mantle and scapulars were strikingly mottled with pale brown, forming a contrasting pale "saddle"; the head showed a darker-capped effect, and the underwing coverts were mottled brown, not solidly blackish brown. The bird was completing wing molt, with the outer two primaries not fully grown (Figure 1) and some molt apparent in the secondaries; the bird was thus on a molt schedule like adults of southern-hemisphere skuas, and was not in its first molt cycle (Howell 2004). With primary molt concluding, the bird would be expected to be in fresh plumage overall; thus the pale saddle is unlikely to have been due to old and bleached feathers. The appearance of this bird is atypical for any age of the South Polar Skua but is quite similar to that of adult or near-adult Brown Skuas from southern populations (*S. l. lonnbergi*); for example, some birds I photographed at Macquarie Island, south of New Zealand, on 17 December 2004 (back cover, lower). Views of the Mendocino bird were inadequate to determine much about its overall size and structure, although the bill was relatively stout and the bird looked to be at the bulky end of the spectrum for a South Polar Skua.

Unfortunately, photographs and field observations have limitations—and establishing the identification of immature skuas seems to be one of these. The recent documentation through genetic analysis of apparent Brown Skuas in Europe (Votier et al. 2004) has overturned the conventional belief that South Polar Skua is the only

Figure 1. Unidentified skua, possibly not a South Polar Skua, about 5 miles off Fort Bragg, Mendocino County, California, 21 August 2004. Note the molt in the primaries and secondaries.

Photo by Matthew Matthiessen

southern skua that migrates to the northern hemisphere. But whether the occasional odd birds in the North Pacific are Brown Skuas, extreme variants of the South Polar Skua, hybrids—or perhaps some combination of all three—remains uncertain. Clarification may require in-hand examination and perhaps genetic analysis. Nevertheless, I encourage observers in the pelagic realm to continue studying and documenting variation in the skuas off the Pacific coast of North America. Those who find any sick or beached birds should take measurements (especially tarsus, exposed culmen, bill depth at posterior end of nares, and wing chord) and, if possible, blood samples or feathers as well as photos; any dead birds should be deposited in a museum collection. With the accumulation of more data, some questions may be answered—and perhaps new ones posed.

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LITERATURE CITED

American Ornithologists' Union. 1957. Check-list of North American Birds, 5th ed. Am. Ornithol. Union, Baltimore.

American Ornithologists' Union. 2000. Forty-second supplement to the American Ornithologists' Union Checklist of North American Birds. Auk 117:847–858.

Devillers, P. 1977. The skuas of the North American Pacific coast. Auk 94:417–429.

Furness, R. W. 1987. The Skuas. Poyser, Calton, Scotland.

Howell, S. N. G. 2004. South Polar Skuas off California. Birding World 17:288–297.

Lee, D. S. Comments on four pre-1853 seabirds reportedly obtained off Monterey, California. Auk 110:402–404.

Malling Olsen, K., and Larsson, H. 1997. Skuas and Jaegers. Yale Univ. Press, New Haven, CT.

Parmelee, D. F. 1988. The hybrid skua: A Southern Ocean enigma. Wilson Bull. 100:345–356.

Votier, S. C., Bearhop, S., Newell, R. G., Orr, K., Furness, R. W., and Kennedy, M. 2004. The first record of Brown Skua *Catharacta antarctica* in Europe. Ibis 146:95–102.

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