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## MOLT, AGEING, AND IDENTIFICATION OF IMMATURE LONG-TAILED JAEGERS

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Immature jaegers pose a notorious identification problem. Here I offer a synthesis of the problem and discuss molt, migration, and the immature plumage stages of the long-tailed Jaegar (*Stercorarius longicaudus*). No study of the immature plumages of jaegers has been based on birds of known age, however, and descriptions of differences in molt and plumage by age are hypotheses that could benefit from testing.

Like many other long-distance migrants, jaegers molt entirely or almost entirely on their nonbreeding or winter grounds, and the molts of immatures resemble those of adults in timing and extent. Adult Long-tailed Jaegers undergo a complete prebasic molt from late September to March, while first-year birds molt from October to June, although some may not finish until August (Cramp and Simmons 1983, Wiley and Lee 1998, pers. obs.). Head and body feathers are molted first, in adults mainly from late September to December, followed by flight feathers, in adults molts molver to March. Adults' prealternate molt in March and April could, therefore, overlap with the end of their protracted prebasic molt. Misunderstanding of this molt strategy (or molt terminology) has resulted in conclusions that birds such as the Sabine's Gull (*Xema sabini*) have a partial (prebasic) molt in fall and a complete (prealternate) molt in late winter and spring (e.g., Grant 1986).

It has been suggested that jaegers undergo increasingly extensive prealternate molts with age (Cramp and Simmons 1983), and that during a bird's first year there may be no prealternate molt (e.g., Higgins and Davies 1996). Younger birds' molting less may reflect their inexperience at foraging, giving them fuel to replace fewer feathers. There is, however, no free molt: if birds can't find enough food, they can't replace their feathers, and even adults may not always complete their prealternate molt (Wiley and Lee 1998).

Wiley and Lee (1998) suggested that one-year-old Long-tailed Jaegers generally move north from their wintering grounds in the boreal spring and summer, although the distance of this migration may be highly variable. Some may remain in the southern hemisphere (e.g., off Peru) while many range into the northern oceans, even to near the breeding grounds, although generally remaining over offshore waters. Most two-year-old birds probably migrate into the northern hemisphere and may go inland to the breeding grounds at least briefly in late summer, after adults establish their territories.

Thus immature Long-tailed Jaegers may be seen off the west coast of North America at any time from spring through fall; some birds may be northbound, others southbound, others simply moving in response to food sources. Juveniles fledge in August (Wiley and Lee 1998) and appear off the west coast mainly from mid-August onward; by late October, most Long-tailed Jaegers have departed North American waters for points south.

Most juvenile Long-tailed Jaegers are gray-brown overall and marked strongly with light and dark barring; the undersides of the primaries show a conspicuous white flash basally, and the projecting central rectrices are bluntly pointed. Typical juvenile Parasitic Jaegers (S. parasiticus) are warmer brown, and Pomarines (S. pomarinus) are darker brown (e.g., Olsen and Larsson 1997).

The upper photo shows a typical one-year-old Long-tailed Jaeger, photographed 26 July 1997 by Jim Lomax at Cordell Bank, off Marin Co., California. In

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distinguishing this bird from the Parasitic and Pomarine jaegers note its structure (the small bill and finely tapered central rectrices), lack of a distinct white flash under the primaries, and prominence of only two white primary shafts on the upperwing. The plumage of one-year-old jaegers is quite similar to that of juveniles, possibly explaining some unseasonably early reports of juveniles. Features distinguishing one-year-old Long-tailed Jaegers from juveniles are the reduction or loss of white flashes under the primary bases, reduction or loss of pale tips to the median and greater upperwing coverts), warmer-toned upperparts (often with a pale buff hindcollar), and longer central rectrices that are fine and tapered. The birds must be seen fairly well for these features to be distinguished, and many individuals may not be aged safely in the field. Also, one-year-old Long-tailed and Pomarine jaegers, with their warmer coloration and paler buff hindnecks than typical of juveniles, can be mistaken easily for Parasitic Jaegers.

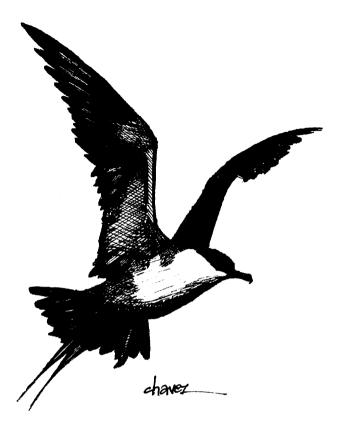
The lower photo, taken by Kevin T. Karlson in early July 1995 at Prudhoe Bay, Alaska, shows a two-year-old Long-tailed Jaeger. At the age of two the birds appear variably intermediate between the first-year and adult plumages and much closer to the adult than to the juvenile. They have a distinctly contrasting dark cap, usually reduced barring under the wings, and longer central rectrices than one-year-old birds. Given present knowledge, however, some "advanced" one-year-olds may not be distinguishable from "retarded" two-year-olds. This overlap may be more prevalent in the larger Parasitic and Pomarine jaegers, whose plumage may develop more slowly. At the age of three years most jaegers of all species look enough like adults that they do not pose serious identification problems, and some Long-taileds at this age may be indistinguishable from adults.

At least off California (pers. obs.) one- and two-year-old jaegers, taken together, may be as common in fall as both juveniles and adults. I hope that appreciating the existence of these intermediate plumages may better help pelagic birders understand these challenging birds.

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Long-tailed Jaeger

Sketch by Jamie M. Chavez