AN ARCTIC LOON IN CALIFORNIA

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At 1415 on 2 November 1991 we found an Arctic Loon (*Gavia arctica sensu stricto*) at Abbott's Lagoon, Point Reyes National Seashore, in Marin County, California. We observed the bird for about an hour at ranges down to about 250 m with binoculars and spotting scopes. It was a clear day, and we had the sun at our backs. After completing field notes and sketches, we returned home to consult the literature and notify other birders. We returned the following morning and, with several other birders, soon located the loon and observed it for over 2 hours. Additional notes were taken as the bird swam intermittently to within 100 m and then farther out into the fog. The following description and Figures 2 and 3 are derived from our notes and sketches taken from 1415 to 1515 on 2 November and from 0845 to 1100 on 3 November. The bird was last reliably reported on 17 November. Other observers photographed and videotaped (Figure 1) the bird, and the identification has been accepted by the California Bird Records Committee.

The bird initially suggested a Common Loon (*G. immer*), owing to its steep forehead, somewhat flattened crown, and largish bill, but was obviously smaller with plumage more variegated than a Common Loon, two of which were present during the observation. The crown, nape, and hindneck were pale slaty gray in contrast to the blackish upperparts and forehead. Pale-tipped mantle feathers formed whitish barring on the upperparts, which is characteristic of juvenal plumage. On 2 November, and for much of the time on 3 November, the lower face, throat, foreneck, and chest appeared white. From closer views on 3 November, however, we noted that the throat and foreneck were clouded with pale gray; seen in good light, the white face contrasting subtly with the pale gray throat recalled the pattern of an Arctic Tern (*Sterna paradisaea*). The chest and underbody were white, with head-on views revealing a slight contrast between the dusky foreneck and white chest. Shadowing suggested a chinstrap, but seen in direct light the foreneck lacked this feature.

The most striking feature of the bird was the amount of white showing on its flanks. When it was actively swimming and diving, the white was limited to patches flaring up at the rear, suggesting those of a Townsend's Shearwater (*Puffinus auricularis*) or Violet-green Swallow (*Tachycineta thalassina*), as shown in Figures 1 and 2, figure 1 of McCaskie et al. (1990), figure 4 of Appleby et al. (1986), and plate 42 of Harrison (1987). When the bird was more relaxed or sleeping, its whole side up to and along the folded wing showed white above the waterline, like a Tufted Duck (*Aythya fuligula*), as shown by Figure 3, plates 187 and 190 of Appleby et al. (1986), and plate 10 of Walsh (1988). This pattern was in obvious contrast to that shown by relaxed or sleeping Pacific Loons (*G. pacifica*), one adult and one juvenile of which were also present on the lagoon. These only rarely showed any white

above the waterline, and that was restricted to a relatively small area of their midsection.

The crown, nape, hindneck, and upperparts of the Arctic Loon were noticeably darker than those of the juvenile Pacific Loon, with the Pacific Loon also showing less contrast between the hindneck and back. The upperparts of the adult Pacific Loon were similar in shade to those of the Arctic Loon.

On one occasion the Arctic Loon could be seen with the two Pacific Loons in the same spotting scope field, allowing a direct size comparison. The Arctic Loon appeared about 10% larger than the juvenile Pacific Loon, but was only slightly larger than the adult. The head and bill appeared larger in the Arctic Loon but the differences were not striking, perhaps because of a similar bill-to-head proportion. McCaskie *et al.* (1990) noted that this difference was not a particularly useful one for separating Arctic and Pacific loons.

TAXONOMY AND DISTRIBUTION

Until recently, the Pacific and Arctic loons have usually been considered conspecific, with the breeding ranges of the three subspecies distributed in a broken ring around the North Pole: *G. a. arctica*, breeding from northern Europe to western Siberia, *G. a. viridigularis*, breeding in eastern Siberia and locally in western Alaska, and *G. a. pacifica*, breeding in northwestern North America (west from Hudson Bay) and northeastern Siberia (AOU 1983, Cramp and Simmons 1977, Walsh 1988). Thus *viridigularis* and *pacifica* are sympatric in eastern Siberia and western Alaska (Wales and Cape Krusenstern, Douglas and Sowl 1993).

Figure 1. Arctic Loon at Abbott's Lagoon, Marin County, California, 4 November 1991. Note head shape and white flank patch.

Videotape by Leslie Lieurance

Portenko (1981) reported no intergrades between *viridigularis* and *pacifica* in their zone of sympatry in eastern Siberia, although he recognized that the two forms occur "under different ecological environments," the former occupying more inland locations in the forest belt and tundra, the latter areas close to the coast. Bailey (1943) reported both *viridigularis* and *pacifica* from western Alaska but noted two specimens that "are not typical and may be intergrades." Storer (1978) discussed reasons for not considering *pacifica* specifically distinct, including evidence of intergrades between *viridigularis* and *pacifica*. The general trend, however, since Portenko (1981) has been to consider *pacifica* specifically distinct, a view adopted by the AOU (1985).

In winter, Arctic Loons occur south to southwestern Europe, the Aral Sea (nominate *arctica*), and Japan (*viridigularis*) (AOU 1985, Cramp and Simmons 1977, Dement'ev and Gladkov 1951; see map in Walsh 1988).

We believe the Arctic Loon at Abbott's Lagoon to represent the first valid record of the species in North America south of Alaska, except possibly for

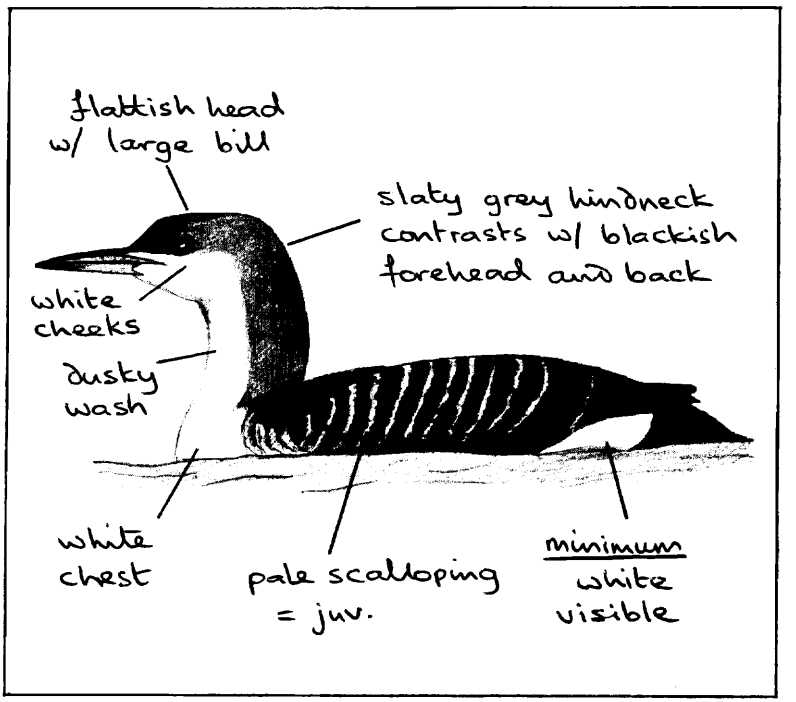

Figure 2. Arctic Loon at Abbott's Lagoon, Marin County, California, 3 November 1991.

Sketch by Steve N. G. Howell

one sketched and described from Massachusetts (Evered 1985). The only previous valid extralimital record for the Arctic Loon is of one collected near Admiralty Island, Alaska, in 1948 (Walsh 1988). The identification of supposed Arctic Loons from British Columbia has been discredited (Campbell *et al.* 1990). A second Arctic Loon was reported from Morro Bay, California, from 7 to 23 December 1991 (T. Edell and G. Smith pers. comm.). This record is still under consideration by the California Bird Records Committee (McCaskie 1992).

IDENTIFICATION SUMMARY

Loon identification has been the subject of numerous publications in recent years (e.g., Stallcup 1983, Walsh 1984, 1988, Evered 1985,

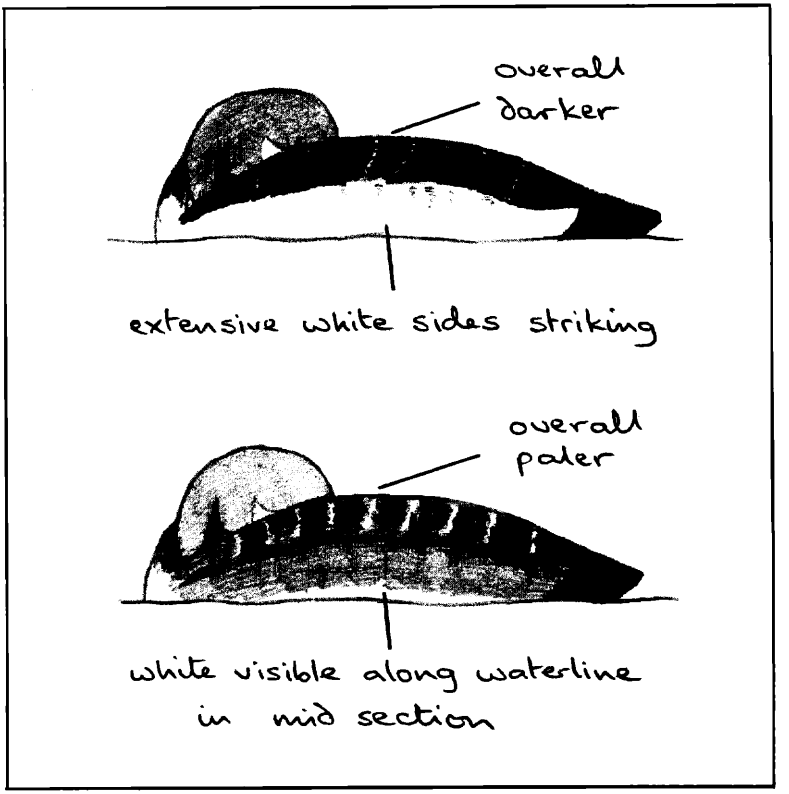

Figure 3. Comparison of sleeping juvenile Arctic Loon (upper) and juvenile Pacific Loon (lower) at Abbott's Lagoon, 3 November 1991.

Sketch by Steve N. G. Howell

Appleby et al. 1986, Harrison 1987, Harris et al. 1989, Roberson 1989, Schulenberg 1989, Kaufman 1990, McCaskie et al. 1990). Separation of Arctic and Pacific loons, however, has remained somewhat poorly defined. We here discuss separation of these two forms in juvenal and basic plumages.

The Arctic Loon averages larger than the Pacific, but the two do overlap (Walsh 1988, Schulenberg 1989). Size, therefore, is of limited use for field identification, although when several birds of two or more species are together it may be of some value.

The head of an Arctic Loon tends to be flatter than that of a Pacific, which is puffy and rounded (McCaskie et al. 1990). This characteristic is ephemeral, however, depending on the activity of an individual bird (such as neck-craning before a dive), but often may be useful.

In alternate plumage, the crown and nape of the Pacific Loon appear pale silvery gray, paler than in the Arctic Loon. Whether or not this trait is of use for separation of birds in juvenal or basic plumages has not been addressed in the literature, although such a difference between the juvenile Arctic and juvenile Pacific loons at Abbott's Lagoon was apparent.

The most striking plumage feature distinguishing the Arctic and Pacific loon is the extent and purity of white visible on the flanks: in all comparable postures, significantly more white is visible on Arctic Loons. A Pacific Loon

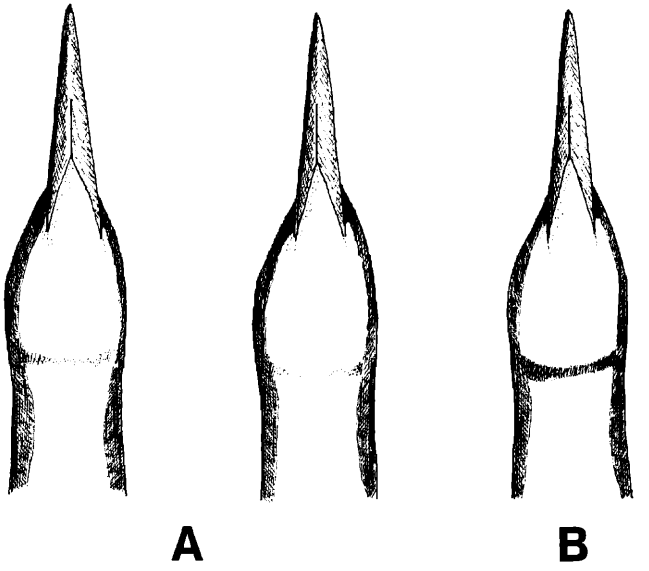

Figure 4. Categories of chinstrap on basic and juvenal-plumaged loons. A, indistinct (two examples); B, distinct.

Sketch by Steve N. G. Howell

riding high in the water or preening can show a moderate amount of white above the waterline (see figure 3 in McCaskie et al. 1990), but its flanks are mostly sooty brownish, in contrast to the clean unbroken white flanks of the Arctic Loon, in which the white extends up to the line of the closed wing. Note also the upward flaring of the white at the rear of Arctic Loon (see plate 10 in Walsh 1988). The bird's posture must be assessed, as loons often roll on the water and then may appear to show extensively white sides.

Other plumage characteristics separating the Arctic and Pacific loons are the band of dark feathers forming a chinstrap on most Pacific Loons in basic plumage, absent on most if not all Arctics, and the dark band across the vent of the Pacific Loon in all plumages, faint or absent in the Arctic Loon (Walsh 1988).

Roberson's (1989) photographs of Pacific and Arctic loon specimens illustrate these features. We found, however, that one of the "Arctic" Loons in these photographs is actually a Pacific Loon. This bird is the top "Arctic" Loon in figures 1 and 4, the bottom "Arctic" Loon in figure 2, and the right-hand "Arctic" Loon in figure 3. We reidentified the bird by using Walsh's (1988) measurements. Its exposed culmen measured 55.3 mm, closer to Walsh's mean of 52.7 mm for *G. pacifica* than to that of 64 mm for *G. a. viridigularis*. The bill depth of 13.6 mm approximates the mean of 14 mm given by Walsh for the Pacific while falling below the range (15–

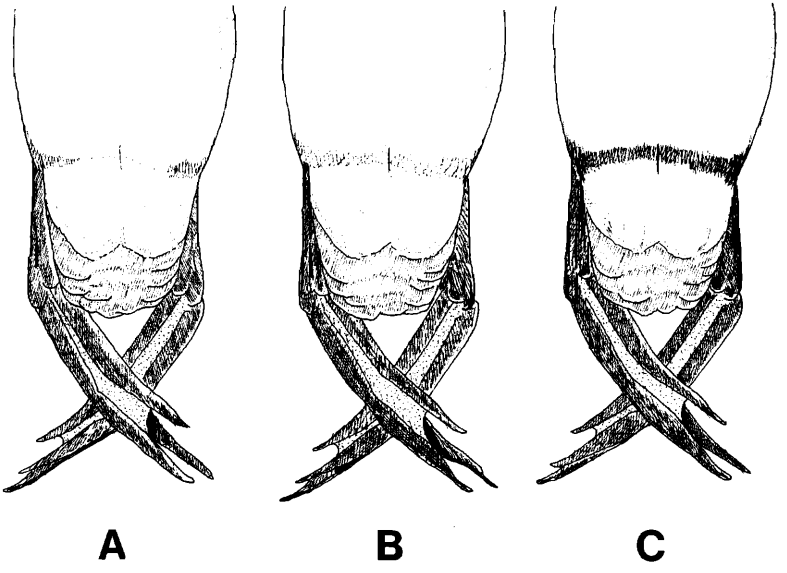

Figure 5. Categories of ventstrap on basic and juvenile-plumaged loons. A, partial; B, complete (pale brown); C, complete (dark brown).

Sketch by Steve N. G. Howell

20 mm) listed for the Arctic. Similarly, the tarsus measurement of 71.6 mm agrees with the mean of 70 mm for the Pacific and falls just below the range (72–91 mm) for *viridigularis*. Also note the indistinct chinstrap on this bird in Roberson's (1989) figure 2 and the partial ventstrap visible in figure 3. His figure 2 and especially figure 4 show that the bird also lacks white flank patches.

Our examination of nearly 150 Pacific Loon and 6 Arctic Loon specimens at the California Academy of Sciences, San Francisco, and the Museum of Vertebrate Zoology, University of California, Berkeley, sheds further light on the usefulness of the chinstrap and ventstrap for identification. (Determining the presence or absence of a ventstrap on a loon is extremely difficult in the field.) We classified birds in juvenal, basic, and alternate plumages as having no, indistinct, or distinct chinstraps, as well as having no, partial, complete pale brown, or complete dark brown ventstraps (Figures 4 and 5). We found that 91% of Pacific Loons in basic plumage and 54% of those in juvenal plumage had indistinct or distinct chinstraps. All Pacific Loons examined had at least a partial ventstrap, and 90% of these showed a complete ventstrap; 93.5% of juveniles had a complete pale brown ventstrap, whereas 69.5% of Pacific Loons in basic or alternate plumage had a complete dark brown ventstrap. No Arctic Loons had even an indistinct chinstrap, whereas 5 of 6 showed a partial strap at the sides of the vent. Table 1 summarizes the presence and extent of these characteristics on the specimens we examined.

Now that criteria for the identification of Pacific and Arctic Loons in all plumages have been established, it will be interesting to see if Arctic Loons are more regular on the West Coast than the two records from late fall 1991 would indicate.

Table 1 Plumage Characteristics of Pacific and Arctic Loons

	Pacific Loon			Arctic Loon	
Feature	Juv. $n = 46$	Basic $n = 44$	Alt. $n = 51$	Basic $n = 5$	Alt. $n = 1$
Chinstrap[a]					
None	21	4	—	5	—
Faint	25	14	—	0	—
Obvious	0	26	—	0	—
Ventstrap[b]					
None	0	0	0	1	0
Partial	0	4	10	4[c]	1[c]
Complete (pale brown)	43	12	3	0	0
Complete (dark brown)	3	28	38	0	0

[a]See Figure 4 for examples of chinstraps.
[b]See Figure 5 for examples of ventstraps.
[c]Ventstraps in Arctic Loons were limited to 3 cm or less on the sides of the vent and were relatively indistinct.

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