PACIFIC (AND ARCTIC) LOON IDENTIFICATION

Difficulty, Unfamiliarity and a Little Bit of Confusion

by Duncan S. Evered, Manomet Bird Observatory

Before commenting on Terence A. Walsh's discussion of "The Field Identification of Arctic Loon," recently published in this journal [BOEM 12 (December 1984): 309-314], it is first necessary to introduce a new nomenclature for the Arctic Loon species complex that will appear in July 1985 in The Auk. Most readers will be familiar with the convention set forth in the 1983 A.O.U. checklist, where Arctic Loon, *Gavia arctica*, has three recognized subspecies: *arctica* and *viridigularis* of the Palearctic, and *pacifica* of the Nearctic. The results of recent extensive field studies confirm that, despite widespread sympatry in northeastern Siberia and western Alaska, *pacifica* and *viridigularis* do not interbreed. Since reproductive isolation is the central criterion of the biological species concept espoused by all recent A.O.U. checklist committees (1983, p. xiii), a "split" was made. In August 1984 the A.O.U. Committee for Nomenclature and Classification elevated the North American race of Arctic Loon to the rank of full species once again - Pacific Loon, *G. pacifica*. At the time of writing, I understand that *G. arctica* will continue to be known as Arctic Loon (Dr. Burt Monroe, personal communication), instead of Black-throated Loon which would be more in line with the European literature. In summary, the erstwhile North American race of the Arctic Loon is now a new species, Pacific Loon (*G. pacifica*). In the new usage Arctic Loon refers to two Eurasian races of *G. arctica* - *arctica* breeding in Europe and western Siberia, and *viridigularis* breeding from eastern Siberia, where it interbreeds with *arctica*, and western Alaska. Furthermore, there is no documented record of *arctica* in North America, and *viridigularis* is not recorded on the Atlantic coast. But as Walsh noted, Arctic Loon in New England is a possibility. More on this issue later.

Walsh's attempt to clarify the field identification of winter (basic) plumaged Pacific Loons leaves room for some comment. While poor views and "odd" individuals do not exactly make the confident identification of Pacific Loon easy, I do think that much of the difficulty experienced stems from a poor acquaintance with the extent of variation shown by the "familiar" species and, most relevantly here, a certain amount of misleading emphasis and confusion in the literature. Here, I wish to offer a rather different emphasis on the plethora of field marks for Pacific Loon presented of late. Also I will discuss a recent "hypothetical" record of Arctic Loon in Massachusetts. Throughout, please refer to the drawing by Lyla R. Messick that accompanies this article; it represents an eloquent summary for all my words.

Given that some of the smaller Common Loons (*G. immer*) do closely approach the larger Pacific Loons in size, even if a direct comparison between a suspect Pacific Loon and Common Loon can be made, body size rightly cannot be regarded as a diagnostic field character. However, this should not obscure the fact, which is of value in the field, that typical Pacific Loons are considerably smaller than Commons and noticeably larger than Red-throated Loons, *G. stellata* (see table in Carlson, 1971). Walsh may have overemphasized the size overlap problem,

because his discussion was based on field experience in Europe with Arctic Loons, which are, generally, appreciably larger than Pacific Loons. Nevertheless, despite the value of body size, the overall structure of Pacific Loons is of greater significance, a point well-described, but not stressed strongly enough by Walsh: typically, Pacific Loons are obviously more thickset than Red-throateds, but never approach the "brutish" appearance of Common Loons.

Several authors have also overstressed the overlap of bill length between Common and Pacific loons (e.g., McIntyre and McIntyre, 1974). This is probably a reflection of the variation in body size discussed above. However, bill length per se should not be a distracting concern. To echo Griscom (1943), "the most important and most nearly absolute character of our three Loons is the bill (proportion)." The greater basal depth and more prominently angular gonys of the Common Loon will always serve to distinguish small Commons from Pacific Loons. I strongly disagree with Leverich (1979) who termed the bill structure a "miserable field mark." If close views are possible and one knows what to look for, bill structure is conclusive. For instance, Dawson's (1923) "portrait of a Pacific Loon" depicts in fact, as the bill structure readily testifies, an immature Common Loon. In addition, the slight-stepped forehead typical of Pacific Loon combined with the more fully rounded, almost maned, nape and hind neck should be stressed as equally distinctive characters. The study of accurate drawings (e.g., Harrison, 1983 - Walsh's are inaccurate with respect to bill and head proportions) and good photographs (e.g., Farrand, 1983) as well as looking closely at the "familiar" loons is necessary to fully appreciate these important points.

A common point worth mentioning concerns the "neck-craning" that Walsh refers to in his letter and which seems unmentioned in the literature. I have frequently observed this behavior performed by Pacific (and Arctic) Loons, but never by Common or Red-throated Loons. I would further add that neck-craning need not precede a dive, and not every dive is preceded by neck-craning, although it often is. I regard neck-craning as probably unique to Pacific (and Arctic) Loons. But whether it can be regarded as a primary field character in itself is unimportant since this behavior serves to accentuate the Pacific (and Arctic) Loon's distinctive bill and head and neck structure discussed above and shown in the accompanying drawing.

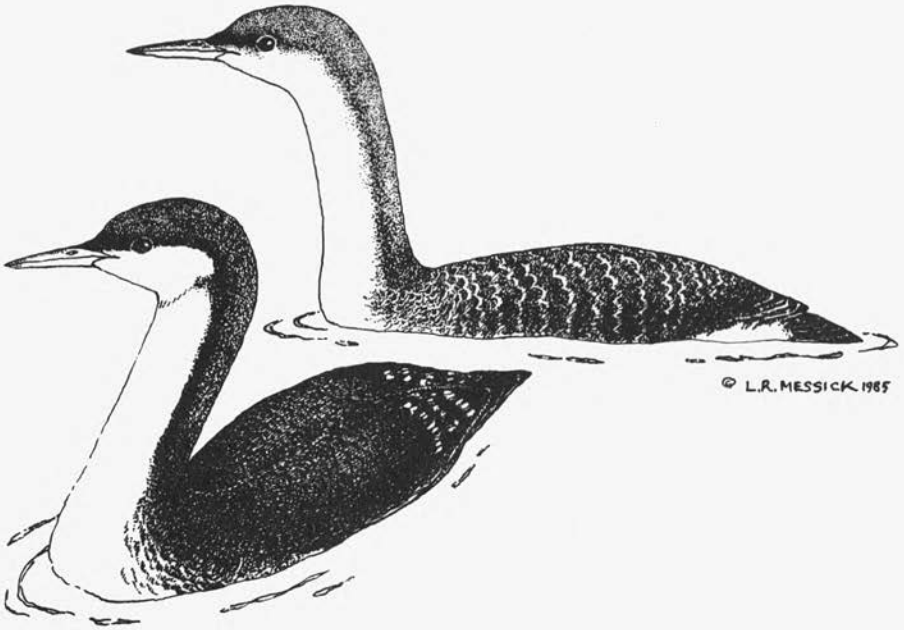
If close views of a Pacific Loon can be obtained, the back pattern proves more informative than many authors have led one to believe. This is because many discussions fail to differentiate clearly between immature and adult back patterns, which are quite different. The accompanying illustration depicts an immature bird on which pale gray margins to the mantle, scapular, and wing covert feathers produce an overall scaly appearance to the upperparts. This general pattern is also typical of Common Loons, but the overall appearance is that of barring rather than scaling in the latter species (mentioned only in Witherby, 1940). For distant individuals, however, Common and Pacific loon back patterning is effectively identical. Another point seldom discussed because of most authors' preoccupation with the identification of Arctic Loon from a distance (when Common Loon is the most likely cause of confusion), is as follows. When a suspected Pacific Loon is closely watched, its jizz is no longer so apparent, and confusion with low-capped, dark-lored, dark,

and rather dagger-billed immature Red-throated Loons becomes a very real possibility. In such circumstances, the prominent white-spotted back of Red-throated Loon in all plumages (most pronounced in adults) serves to prevent error. In all comparisons an important caveat is the effect of fading and abrasion on the prominence of scaling (or spotting); immatures in worn plumage (like the January bird described by Carlsqn) can appear a uniform brown. On the other hand, adult Pacific Loons (e.g., Farrand,1983,and illustration) are mostly unmarked on the back, unlike any other loon, and therefore look uniformly dark. Close up, they often show a little brilliant white spotting on the scapulars and/or wing coverts (fragments of new or old summer dress).

As Walsh mentions, the whitish thigh patch has been used widely as a field mark for Arctic Loons *(G. a. arctica)* in Europe. Although I would not join Harrison (1983) in regarding it as the "best character" for this species (after all, it is a feather placement phenomenon), this field mark is at least useful for spotting distant loons for closer attention. The intriguing question raised by Walsh is whether a thigh patch occurs at all in Pacific Loon. Walsh first concluded tentatively, then more assuredly after personally seeing eight Pacific Loons, that the thigh patch might indeed be absent in Pacific Loon. My own sample of about thirty Pacific Loons seen around San Diego in December 1984 included two with evident thigh patches, agreeing well with Walsh's contention that the thigh patch is "a convenient method of separating the (sub) species in the field."

If the thigh patch is specific to Arctic Loon, prolonged and close views of a first-year loon, either Pacific or Arctic, discovered (but regrettably not successfully photographed) in excellent weather conditions from the parking lot at Plymouth Beach on October 29, 1984, is of great interest. Based on the field notes of the author and artist, this loon is illustrated in the accompanying drawing (the upper bird); as can be seen, it had a prominent flank patch. In addition, though admittedly this is more speculative, this bird was very noticeably larger than the surrounding Red-throats and had a relatively long, heavy bill and large-headed appearance, characters associated with Arctic Loon (established in the literature and in personal observation of study skins). My notes taken at the time remarked on the great similarity between this individual and Arctic Loons seen in Europe, in contrast to my reaction to Pacific Loons - "like Arctics but smaller and (facially) cuter." [Ed. note: The author intends the word "cuter" to convey the quality of sweetness, often referred to by birders as distinguishing the Mew Gull from the Ring-billed.] To suggest the individual seen at Plymouth Beach was an Arctic Loon rather than a Pacific Loon based on such untested and rather subjective material is undeniably speculative, but I feel not extremely so.

If an Arctic Loon, to which race did the Plymouth Beach individual belong? I favor a western origin for the following reasons. Personal observations of Golden Eagle (same day) and gray-phase Gyrfalcon (five days earlier) in the Plymouth-Manomet region, suggest an influx of birds from the northwest had recently occurred. And more strongly suggestive, coinciding with the sighting of the Plymouth individual was the largest movement of Red-throated Loons in the fall according to Operation Seawatch (a daily two-hour morning seawatch from Manomet Point), which



Loon observed at Plymouth Beach, October 29, 1984, (upper bird) and an adult Pacific Loon (lower bird)

Illustration by Lyla R. Messick

The upper bird is an immature: note the scaling pattern on the (brown) back, the more extensive dark on the culmen and tip of bill, the dark (brown) eye, less contrasting border between white and gray-brown of the neck, and lack of a well-defined chin strap. It is suggested that this bird is an Arctic Loon of the subspecies *viridigularis* due to its larger size (compared to Pacific Loon), longer and heavier bill structure, proportionally larger head, and presence of a white thigh patch.

The lower bird is a Pacific Loon and an adult: note the paler (reddish) eye, darker (almost black) upperparts with no back scaling or prominent white tips to the scapulars, the well-defined neck contrast, and chin strap. Also note the following field marks: lack of white over and around the eye (typically found in Common Loon, rarely in Pacific), the preocular dark patch that is a shadowing effect - not dark feathering, and chin strap (diagnostic but difficult to see and may be absent).

recorded 318 on October 27 and 434 on October 28 (Yurkunas, 1985). Thus a major exodus of high arctic breeding loons occurred two days before, and since this bird was found in the company of nearly 30 loons, it was probably part of that movement. In conclusion, the Plymouth Beach Arctic Loon more likely originated from the west than the east and, hence, was of the subspecies *viridigularis*.

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REFERENCES

Carlson, C. W. 1971. Arctic Loon at Ocean City, Maryland. Maryland Birdlife 27: 68-72

Dawson, W. L. 1923. The Birds of California, Vol. 4: 2036. South Moulton Company.

Farrand, J. (ed.). 1983. The Audubon Society Master Guide to Birding, Vol. 1. Alfred A. Knopf, New York.

Griscom, L. 1943. Notes on Pacific Loon. Bulletin of the Massachusetts Audubon Society 27: 106-109.

Harrison, P. 1983. Seabirds: An Identification Guide. Houghton Mifflin, Boston.

Leverich, J. T. 1979. Identification of Arctic Loons. BOEM 7: 186

McIntyre, A. E. and J. W. McIntyre. 1974. Spots Before the Eyes, An Aid in Identifying Wintering Loons. The Auk 91: 413-415.

Witherby, H. F. (ed.). 1940. The Handbook of British Birds. Witherby Ltd., London.

Yurkunas, V. G. 1985. "Operation Seawatch," Summary Report, 1984. Manomet Bird Observatory (unpublished).

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