



Identification of Pacific Diver – a potential vagrant to Europe

Andrew Birch and Cin-Ty Lee

Pacific Diver (*Gavia pacifica*) is the North American counterpart of Black-throated Diver (*G. arctica*). The two species were 'lumped' until quite recently, but it is now generally accepted that they are distinct species (AOU 1985; Sibley & Monroe 1990).

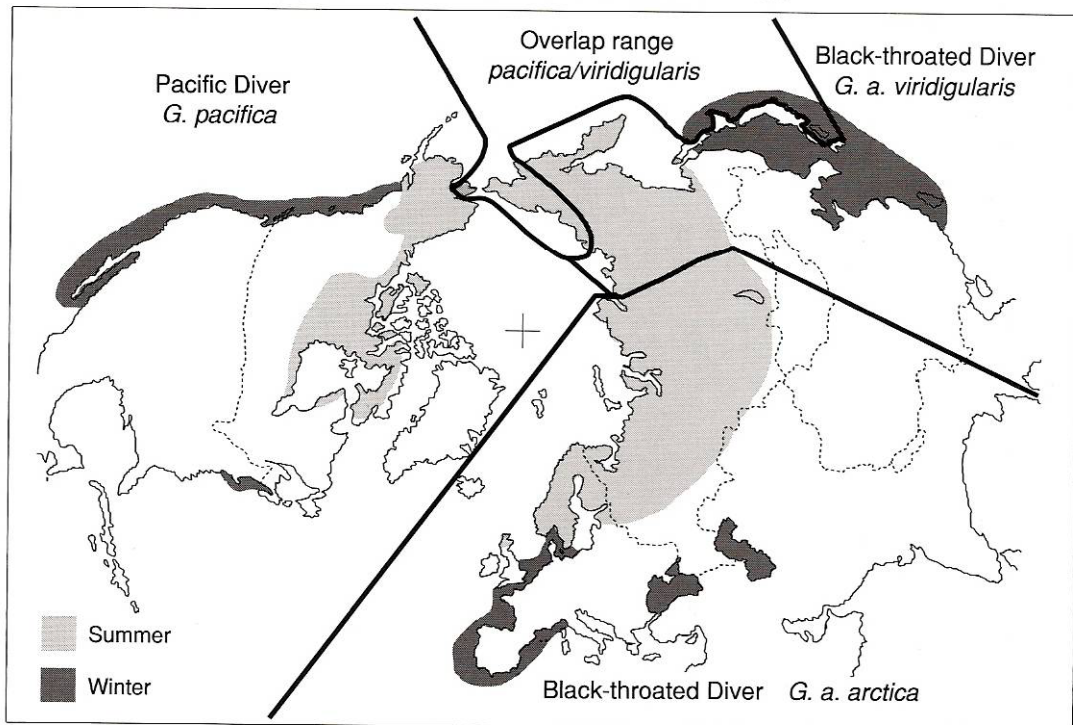
Pacific Diver breeds from Hudson Bay west to Alaska and northeastern Siberia, and winters south to Japan, along the Pacific coast of North America south to Baja California and casually in the interior of western North America. It is also regularly recorded in winter along the Atlantic coast from Maine to New York, and it is probably more frequent there than the records suggest (due to the poor and often misleading treatment it is given in field guides). Pacific Diver is undoubtedly a potential vagrant to Europe; it may even have been overlooked....

Taxonomy

There are two races of Black-throated Diver: *G. a. arctica* which breeds from Northern Europe to Western Siberia and *G. a. viridigularis* which breeds in eastern Siberia and locally in western Alaska (AOU 1983, Cramp & Simmons 1977, Sibley & Monroe 1990 & Walsh 1988). The race *viridigularis* averages larger and longer-billed than the nominate race, and has the foreneck glossed with green (rather than purple) in summer plumage. They are not considered to be distinct species because intergradation occurs in eastern Asia (Sibley & Monroe 1990).

In contrast, Pacific Diver and *viridigularis* have been reported breeding sympatrically in eastern Siberia and western Alaska, sometimes even on the same pond (Bailey 1943, Douglas & Sowl 1993, Gabrielson & Lincoln 1959,

Summer and winter distributions of Pacific Diver and the two races of Black-throated Diver.
The Azimuthal Equidistant map projection used shows the true shortest distances from Britain.



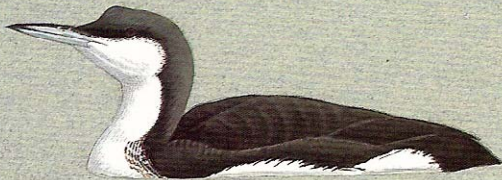
Black-throated Diver
nominate summer



Black-throated Diver
adult winter



Black-throated Diver
adult winter



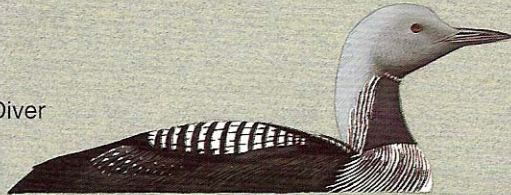
Black-throated Diver
juvenile/first-winter



Pacific Diver
adult winter



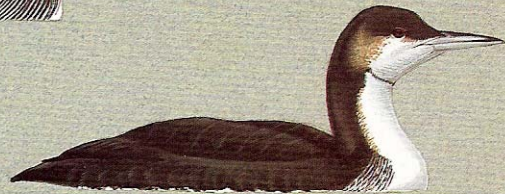
Pacific Diver
summer



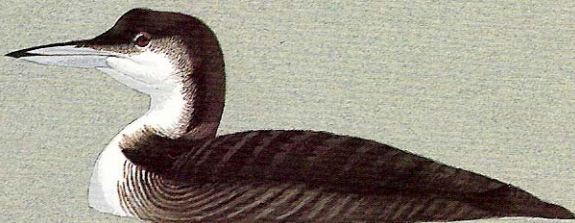
Pacific Diver
juvenile/first-winter



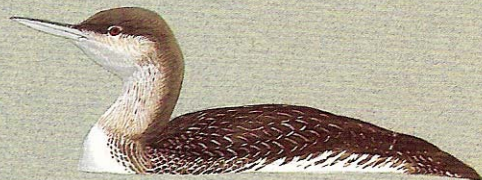
Pacific Diver
adult winter



Great Northern Diver
adult winter



Red-throated Diver
juvenile/first-winter



Andrew Birch '95

Kistchinski 1978, Portenko 1981 and Stepanyan 1975). Specimens suggesting intergradation between the two species have been reported by Bailey (1943) and Storer (1978), but the overwhelming evidence supports full specific status.

A number of major papers have discussed the identification of divers, but we urge readers to refer to two in particular; 'Identifying Pacific Loons - Some Old and New Problems' by T. Walsh (Birding 20:12-28, 1988) and 'Notes on Identifying Arctic and Pacific Loons in Alternate plumage' by G. McCaskie, J.L. Dunn, C. Roberts and D. Sibley (Birding 22:70-73, 1990). Kaufman (1990) is also a most important reference. Our field observations in the USA and Europe, and our extensive examinations of the study skins at the University of California, the San Bernadino County Natural History Museum and the Los Angeles County Natural History Museum, leave us very much in agreement with the above authors.

Naturally enough, little has been published on the identification of Pacific Diver in the European literature, and this article aims to bring the matter to a wider audience. We first describe features that are independent of age, and then address each plumage separately (ie summer, winter and juvenile plumages).

Structure

Size Pacific Diver is smaller and more delicate than Black-throated Diver. Although there is considerable individual variation in the size of Black-throated Divers, the smaller size of Pacific Diver should always be detectable in direct comparison, and lone individuals are usually noticeably slighter. In general, Black-throated Diver approaches Great Northern Diver (*G. immer*) in bulk, whereas the daintiness of Pacific Diver is more comparable to the smaller Red-throated Diver (*G. stellata*).

Bill In the field, Pacific Diver shows a noticeably smaller and thinner bill than Black-throated Diver. Measurements of specimens support this; on Pacific Diver, the culmen averages 20mm (c.25%) shorter and the depth of the bill at the base is consistently proportionately less than on Black-throated Diver. The overall shape and impression of the bill, combined with the body size, may create a distinctive impression in the field, although McCaskie *et al.* (1990) concluded that the difference in bill size was not particularly useful in the field (for identifying Black-throated Diver).

Head shape Pacific Diver tends to have a smoother, rounder head, which McCaskie *et al.* (1990) aptly described as appearing 'puffy'. Combined with the small bill, this gives Pacific Diver a more 'gentle', dove-like appearance. Black-throated Diver, on the other hand, tends to have a more angular 'block-like' head shape, often with a distinct peak at the forehead, which gives it a flat-topped appearance.

Neck The neck of Pacific Diver is proportionately shorter and stockier than that of Black-throated Diver, and this gives it a more hunched appearance overall.

Plate 1: adult summer Black-throated Diver *Gavia arctica*, at nest, June (E.K.Thompson/Aquila)



Jizz Pacific Diver tends to hold its bill horizontally (rather than just slightly raised like Black-throated Diver), and this emphasises its squat appearance. Of course, it is important to realise that posture alone is not sufficient for identification, as an individual may alter in this respect depending on how it is behaving (feeding, preening, diving or resting).

Plumage features for all ages

Flanks The best field mark in all plumages is the pattern of the rear flank. Pacific Diver has all dark flanks: it lacks Black-throated Diver's conspicuous white rear flank patch. In the field, this flank patch on Black-throated Diver appears as a conspicuous posterior white patch which 'flares' to a greater or lesser extent above the waterline. In Pacific Diver, the white undersides do not break into the dark flank band around the thigh area. Pacific Diver can show white above the waterline if it is swimming high, but it never shows the shape and extent of white that Black-throated Diver displays. The key is to note whether the white on the flanks extends as far as the rump (indicating Black-throated Diver).

Undertail-coverts and 'vent strap' All Pacific Divers show a black or brownish-grey 'strap' across the vent, whereas the same region on Black-throated Diver is invariably white. The vent strap on Pacific Diver is almost always complete. Reinking & Howell (1993) reported that 90% of the specimens of Pacific Divers they examined showed a complete vent strap, and the rest showed incomplete straps. Our own examination of Black-throated Diver specimens revealed no complete vent straps on any individuals. In those that displayed a partial vent strap, they were all less extensive than on the most poorly marked Pacific Diver. Although this feature is not easy to observe in the field, it can often be seen on preening or flying birds. The effect of the vent strap on Pacific Diver is to make the undertail-coverts appear darker when viewed from the side.

Summer plumage

Foreneck patch *G. a. viridigularis* has a green-glossed foreneck patch, whereas *G. a. arctica* and *G. pacifica* both usually have purple-glossed foreneck patches, though a small percentage of Pacifics may show a green gloss. However, this colouration is actually very difficult to see in the field; in most birds of all forms the foreneck simply appears black unless they are viewed in absolutely ideal light conditions.

Neck stripes The white neck stripes on Pacific Diver are noticeably thinner than those on Black-throated Diver (see McCaskie et al 1990); our study of specimens revealed that they are about 25% narrower. The overall impression on Pacific Diver is that its white neck stripes are thinner than its black stripes, and often they appear disrupted. On Black-throated Diver, the much wider white stripes can appear as thick as the black stripes, and are unbroken. Effectively, Black-throated Diver shows white 'stripes' and Pacific Diver shows white 'pencil-lines'. The white stripes on Black-throated Diver are often visible even at a distance, whereas those of Pacific Diver are less obvious; this effect is accentuated by the darker nape of Black-throated Diver, which highlights the white stripes. Additionally, Pacific Diver typically has five to seven white neck stripes whereas Black-throated normally shows five or six.

Throat stripes The white throat stripes on Pacific Diver are usually rather less conspicuous than those of Black-throated Diver, but there is too much individual variation in both the brightness and the thickness of these stripes on both species for this to be a standard field mark. It may occasionally be helpful as a supporting field mark, however.

Nape Pacific Diver has a very pale ash-grey or silvery-grey nape which contrasts with the rest of the neck which is dark grey, while Black-throated Diver shows a comparatively uniform nape and neck colour.

Plate 2: adult summer Pacific Diver *Gavia pacifica*, Churchill, Canada, June (Chris Schenk/Windrush)





Plate 3: adult summer Pacific Diver *Gavia pacifica*, Canada, July 1995 (Mike Lane/Aquila)



Plate 4: Pacific Diver *Gavia pacifica*, California, USA (H. Clarke/Vireo)



Plate 5: adult winter Pacific Diver *Gavia pacifica*, California, April 1993 (Bart Donato)



Plate 9: Black-throated Diver *Gavia arctica*, probably first-summer, Sweden, August 1994 (Lars Carlsson)

On specimens, we found that the basal nape feathers of Pacific Diver are white and thus it is feasible that, should considerable wear occur, the nape may appear even paler. As the basal nape feathers of Black-throated Diver are grey, the nape should always be less pale than in Pacific Diver.

Winter and juvenile plumages

Separation of Pacific and Black-throated Divers in winter and juvenile plumages is possible, using a combination of the structural and postural characters described above and the plumage characters discussed here. However, it is important first to age the bird in question, since certain plumage features vary with age. In both species, juveniles are distinctly paler than adults. The scapular feathers on juveniles have pale edges, which give the upperparts a scaly appearance. Adults, on the other hand, have uniformly dark upperparts without pale feather edgings. Juveniles also have paler and more diffuse neck and facial patterns than adults.

Adult winter

Throat strap On winter adults, the presence of a well-defined dusky throat strap is diagnostic of Pacific Diver. Some Black-throated Divers might show a slight dusky throat strap (or impression of one), but it is never an obvious and well-defined feature as it normally is on Pacific Diver. The absence of a throat strap, however, does not necessarily preclude identification as Pacific Diver, since some adults can have very faint and inconspicuous throat straps.

Nape Pacific Diver may show a paler nape than Black-throated Diver, contrasting with the rest of the head and neck; on such bleached individuals, the nape may become so pale that the diffuse darker stripe on the side of the neck becomes very obvious.

Head and neck Pacific Diver has a duskier and more diffusely patterned head and neck than Black-throated Diver. The side of the head, particularly in the region of the ear-coverts, is greyish-brown and often appears slightly blotchy. The neck is also often washed with greyish-brown, so the boundary

between the dark neck and the paler cheek is obscure. Sometimes (but mostly in juveniles), Pacific Divers exhibit a thin grey malar stripe. On Black-throated Diver, the region of the ear-coverts is typically white, although it may occasionally show a pale grey wash. The clinching factor is to note the extent of grey or black beneath the eye-line as it extends behind the eye. On Pacific Diver, there is considerable grey below the eye-line. On Black-throated Diver, this line typically defines a sharp demarcation between the dark crown and hindneck and the white cheek and throat. The dark of the hindneck arcs smoothly to a point-like 'sideburn' on the lower cheek. On Pacific Diver, this feature is often less prominent because it can be obscured by the duskier ear-coverts and throat strap. Thus, overall, Black-throated Diver appears 'clean-faced' and Pacific Diver appears 'dirty-faced'. The throat strap on Pacific Diver accentuates this.

Juveniles

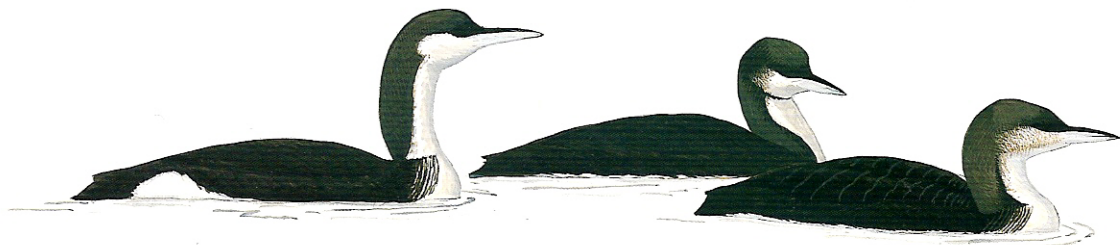
Head and neck The head and neck patterns of the juveniles of both species, although still reminiscent of the respective adult winters, are less sharply defined, as well as being paler. Thus even juvenile Black-throated Diver can appear a 'dirty-faced', although the line of demarcation (*ie* the eye-line as it extends behind the eye) should still be a good feature. Many juvenile Pacific Divers show a thin grey malar stripe or at least some discolouration in this area. Often the whole face may have a grey wash. In juvenile Black-throated Diver, the extent of the grey wash below the eye-line is more extensive than in adult winter, but still not as extensive as in adult or juvenile Pacific Diver. There is a variable darker stripe up the side of the neck in both species.

Throat strap Juvenile Pacific Divers often have an inconspicuous throat strap or none at all. Reinking & Howell (1993) found that just over half of the specimens they examined had indistinct or distinct throat straps. Thus, the absence of a throat strap on a potential Pacific Diver is certainly possible. In this case, one should rely upon head pattern and the presence or absence of white flanks or vent strap.

Summary

	Pacific Diver	Black-throated Diver
Overall size	Smaller and daintier	Larger and bulkier
Head shape	Rounded; often slightly 'puffy'	Angular, with crown often flatter
Bill size and shape	Proportionately smaller and thinner at base	Proportionately larger and thicker; dagger-like
Jizz	Usually holds bill horizontally; posture typically hunched	Often holds bill pointed slightly upwards; usually not hunched
Rear flanks	Black or blackish	White
Vent strap	Black or blackish	Absent or partial and indistinct
SUMMER		
Neck stripes	White stripes thinner than black stripes; white stripes often broken	White stripes thicker, visible at distance, and usually unbroken
Nape	Pale ash-grey, or silvery-grey	Darker ash-grey
WINTER & JUVENILE		
Head	'Dirty-faced' with grey wash across ear-coverts; diffuse face pattern without sharp demarcation between cheek and hindneck; juveniles have a greyish malar stripe and are often 'dirtier-faced'	'Clean-faced' with white ear-coverts; sharply-defined face pattern, with sharp demarcation between cheek and hindneck (but juveniles less clean)
Neck pattern	Smoother, relatively continuous boundary between grey hindneck and white foreneck	Conspicuous dark 'sideburn' intrusion between grey hindneck and white foreneck
Throat strap	Almost always present but highly variable, ranging from dark and conspicuous to extremely pale and faint	Not present; throat area pure white

Typical postures of well-marked birds (*Andrew Birch*)



Black-throated Diver
adult winter

Pacific Diver
adult winter

Pacific Diver
juvenile; a quite well-marked
bird with a dusky face



Plate 10: Pacific Diver *Gavia pacifica*, with Sea Otter, Monterey, California, USA, 1982 (Alan Roberts)

Acknowledgements

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This identification forum aims to alert European birders to Pacific Diver; it is an ongoing debate, and we invite readers comments in order that *Birding World* may present further evidence and discussion on this topic. Eds.

