

**The Effect of Wind Direction on Numbers of Seabirds Seen During Shipboard Transects.**—Counts of birds at sea may be affected by glare, wave height and wave direction relative to the ship's course (Dixon 1977, Duffy 1983, Tasker et al. 1984), inter-observer variability (Duffy and Hecht 1984, Powers 1982), the area counted (Duffy and Schneider 1984, Griffiths 1981), the counting method (Heinemann 1981, Tasker et al. 1984), and position of the observer on the ship (Dixon 1977, Duffy and Hecht 1984). In this note we examine the influence of counting from the lee versus the windward side of a ship.

During a cruise covering the area inshore of the 500 m bottom contour between Quoin Point (35°40'S, 19°30'E) and the Orange River (28°35'S, 16°10'E), off the west coast of South Africa, one of us (SCB) counted birds during 14 transects from the bridge of the R. S. *Africana*, at a height of 11.5 m above the waterline. He alternated counts from the lee (looking downwind) and windward (looking into the wind) sides at 5-min intervals until he had performed 3 of each during a transect. Transects took place between 7 and 28 January 1984. Wind direction and strength were transcribed from the ship's computer-logger. Wind speeds during the transects ranged from 8–16 m/s (15–31 knots). Only transects where the wind fell within 90° of perpendicular to the vertical axis of the ship were included, since head and tail winds may have affected counts differently. During each 5-min period, all birds were counted which passed over an imaginary line extending horizontally 300 m from the bridge (Griffiths 1981). For purposes of analysis, we combined all the counts by species and compared the number of transects when lee or windward counts were higher (Table 1).

Sixteen taxa were observed during the transects (Table 1). Of these, the number of transects where upwind counts exceeded downwind counts was equal to the number of transects where downwind counts were greater. However, the total number of birds seen looking upwind (537) was almost twice that seen looking downwind (225). The totals were significantly different ( $\chi^2 = 127.7$ ;  $df = 1$ ;  $P < 0.01$ ). Most of the difference can be attributed to two large counts (one of 202 Sabine's Gulls and one of 200 Red Phalaropes) which occurred on single transects. If these were excluded, the total counts became 135 (upwind) and 225 (downwind) which was significant in the opposite direction, suggesting that total numbers of birds were perhaps too sensitive for such comparisons.

TABLE 1. Seabird counts made upwind and downwind of the ship's course during 30-min transects (D = downwind; U = upwind;  $n = 14$ ).

Bird species	No. of counts		No. of birds	
	D > U	U > D	U	D
Black-browed Albatross ( <i>Diomedea melanophris</i> )	2	4	6	4
Shy Albatross ( <i>Diomedea cauta</i> )	3	1	2	4
Yellow-nosed Albatross ( <i>Diomedea chlororhynchos</i> )	0	1	9	6
White-chinned Petrel ( <i>Procellaria aequinoctialis</i> )	1	5	12	2
Cory's Shearwater ( <i>Calonectris diomedea</i> )	3	0	5	25
Great Shearwater ( <i>Puffinus gravis</i> )	0	1	2	1
Sooty Shearwater ( <i>Puffinus griseus</i> )	1	3	37	24
Great-winged Petrel ( <i>Pterodroma macroptera</i> )	3	2	22	36
Cape Gannet ( <i>Sula capensis</i> )	2	2	10	11
Red Phalarope ( <i>Phalaropus fulicaria</i> )	0	1	200	0
Parasitic Jaeger ( <i>Stercorarius parasiticus</i> )	1	0	3	5
Antarctic Skua ( <i>Catharacta antarctica</i> )	0	1	2	0
Kelp Gull ( <i>Larus dominicanus</i> )	2	1	3	23
Sabine's Gull ( <i>Larus sabini</i> )	0	1	202	0
Swift Tern ( <i>Sterna bergii</i> )	1	0	0	5
Unidentified tern ( <i>Sterna</i> spp.)	4	1	22	79
Total	23	24	537	225

Looking at the individual species totals, downwind counts were higher than upwind counts in 8 of 16 species. The difference was not significant ( $\chi^2 = 1.19$ ;  $df = 1$ ;  $P > 0.05$ ).

The data from this cruise showed no difference in the choice of side used during counts. This suggests that observers would be justified in choosing the more comfortable lee side which, in adverse conditions, would permit more extended viewing than would exposure to high winds and spray on the windward side. However, the prevalence of birds to the leeward or windward sides of a ship may differ when winds are stronger than the 57 kmph maximum encountered during our transects.

Comparisons of paired counts, taken sequentially from the lee and windward sides of an oceanographic vessel, showed no clear differences between the sides, suggesting that, at least in the sub-gale conditions encountered during our work, wind exposure did not affect counts.

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**Observations of a Flying Common Loon Carrying a Fish.**—Red-throated Loons (*Gavia stellata*) commonly transport fish in their bills from coastal feeding sites to freshwater nesting sites (Norberg and Norberg, *Ornis Fenn.* 53:92–95, 1976). Munro (*Auk* 62:38–49, 1945) reported that fishless lakes were used for nesting by the Common Loon (*Gavia immer*), but the transportation of prey by a Common Loon in flight has not been documented. I observed 3 instances of such behavior while studying Common Loons at Jerseyfield and Diamond lakes, located in southern Hamilton County, New York. Jerseyfield Lake is 174 ha; Diamond Lake is 10.5 ha. Diamond Lake drains into Jerseyfield Lake and is approximately 2.0 km distant. Loons were observed with a 15–60x, 60 mm spotting scope.

At 0830 on 15 July 1984, an adult loon landed at Diamond with a fish held crosswise in its bill. In joining its mate and chick, the loon dove several times with the fish but the fate of the fish was not observed. The same loon left within 45 minutes of its arrival, flying toward Jerseyfield. On 7 August 1984 a loon at Jerseyfield Lake was under observation.