

The colonies covered only a small portion of the coastline and, except for the North West Bay colony (which was centred on an unusually large rock pile), there was no obvious geographical feature that might be used to predict the position of further colonies. As there appears to be abundant suitable nesting habitat near the present colonies, habitat is probably not a limiting factor in the distribution on Codfish Island.

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SHORT NOTE

Waders at Suva Point, Fiji, during a cyclone

The waders of the Suva Point area of Viti Levu have been well described (Morgan & Morgan 1965, Smart 1971, Miles 1982, Skinner 1983), including their numbers and arrival and departure times. Suva Point has large areas of sheltered intertidal mud and sand flats and a few isolated stands of mangroves. It is the only suitable wader feeding ground for many kilometres in each direction.

During periods of residence in Suva during 1992 and 1993 I made regular observations of waders from Suva Point as far north-east as Vatuwaqa Beach. Of particular interest were land counts made at the time Cyclone 'Fran' was closest to Suva in March 1992.

As Skinner (1983) stated, Pacific Golden Plover (*Pluvialis fulva*), Turnstone (*Arenaria interpres*) and Bar-tailed Godwit (*Limosa lapponica*) roost at high tide on a string of playing-fields adjacent to the shore. On 8 March 1992, between 0830 and midday (over high tide), when Cyclone 'Fran' was causing higher than usual tides and the onshore wind was E to NE at Force 7 to 9, I made counts at all known playing-field or lawn roosting sites. Waders were found roosting and sheltering at eight sites (Stella Maris School rugby field, Institute of Marine Science lawns, FINTEL lawns Vatuwaqa, rugby field opposite Golf Club, rugby field opposite IMR, Corpus Christi College

rugby field, Suva Grammar School rugby field and Pacific Theological College rugby field). The following totals were recorded:

Pacific Golden Plover	263 (47 in breeding plumage)
Bar-tailed Godwit	60 (10 in breeding plumage)
Turnstone	57 (all in breeding plumage)

As the sea was covering the whole shore these counts probably reflect the numbers of each of these species in the district at the time. I found no birds roosting in the stands of mangroves but three Wandering Tattlers (*Tringa incana*) were huddled behind some wave-washed rocks. About 50 tattlers were usually present but I did not find them or the usual 12 or so Whimbrel (*Numenius phaeopus*), during the passage of the cyclone. After the cyclone, when conditions had calmed, I made high tide counts on 14 March 1992, when the wind was moderate SE. A total of 295 Pacific Golden Plovers was recorded from four of the roosting lawns. Waders were absent from the remainder of the lawns and from the rocks and mangroves at high tide level. No other species were present. The disappearance of Turnstones, Godwits and other species was curious, but it is possible that the cyclone hastened their migratory departure, which is normally in late March and early April (Skinner 1983). The numbers in breeding plumage suggest that departure time was close. Few data are available on proximate factors influencing departure of wintering Charadrii, but the influence of wet and dry seasons, rainfall and climate have been discussed (Balanca 1984, Vyawahare 1986, Bolster & Robinson 1990).

The summer counts by Skinner (1983), based on about 50 regular transect counts of the intertidal flats in 1981 and 1982, are very similar to those recorded here. He counted 168 ± 50 Pacific Golden Plover, 65 ± 15 Bar-tailed Godwit and 70 ± 15 Turnstone. This indicates that numbers of waders spending the summer in this region have probably not declined, despite increased industrialisation and 'reclamation' of intertidal areas around Suva.

The 1992 observations seem to show that counts during severe weather conditions at all known roosting sites may be a means for relatively accurate 'one-off' censusing; also, that numbers of waders in the Suva Point area have not changed for at least 10 years; and that severe weather may possibly hasten the migratory departure of some species.

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