CHANGING STATUS OF THE LAYSAN ALBATROSS IN MEXICO

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THE LAYSAN ALBATROSS (*Diomedea immutabilis*) is presently the most abundant albatross in the northern Pacific, with the bulk of the population breeding from November to August in the Hawaiian Islands. Following the extirpation of many of its colonies in the latter half of the 19th century, the Laysan has, with protection, staged an impressive comeback. An increase in numbers has been noted off Mexico since the mid 1970s (Pitman 1985), but how much this may reflect an increase in observers is unknown. That a marked expansion occurred in the 1970s is supported by Pyle and Ralph (1972-1981), Ralph and Pyle (1977-1981), and Pyle (1982-1988) who describe the unprecedented colonization by Laysans in the main Hawaiian Islands, dating from about 1976; and by Hasegawa (1978), who reported the discovery of Laysans on Torishima (27°40'N, 142°07'E), in the Ogasawara (Bonin) Islands, in January 1976. While Laysans formerly bred in the western Pacific, in the Izu Islands (about 210 miles north of the Ogasawara Islands), from at least 1918-1933 (Rice and Kenyon 1962a), there is no historical record of them breeding in the eastern Pacific.

This note summarizes the status of the Laysan Albatross in Mexico, based largely on a census we made, January 20 to March 5, 1988, of all of the major offshore rocks and islands of western Mexico (Fig. 1).

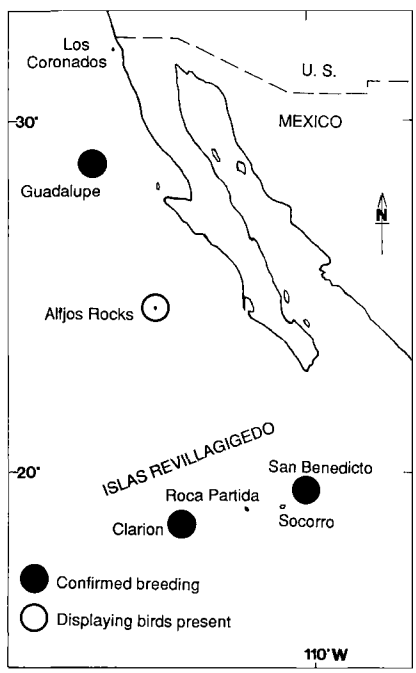

Figure 1. Locations where Laysan Albatrosses were observed, January and February 1988.

PRESENT STATUS

Isla Guadalupe. Jehl and Everett (1985) reported no Laysans on Guadalupe through March 1982, and Oberbauer *et al.* (1989) confirmed that none was present in January 1981. Dunlap (1988), however, made the startling discovery of a small colony of Laysans, including six well-grown young, above the naval base at the south end of Guadalupe, May 22, 1986.

We saw no Laysans at the north end of Guadalupe, January 23 or 24, 1988, but the breeding colony at the south end was still present. On January 26, we estimated at least 35-40 birds, 12 of which were incubating single eggs (Fig. 2). Ten of the 12 nests were closely spaced in an area 50 x 15m; the other two were about 15 and 50m north of the main group. Three pairs and one threesome were stationed around the periphery of nesting birds and frequently engaged in prolonged displays. A few single birds visited the colony for up to an hour or so, including the mate of an incubating bird which quickly changed duties. Leaving Guadalupe the afternoon of January 27, we noted two or three Laysans circling low over Islote Afuera, a small islet about two miles south of the naval base and another potential breeding site. Oberbauer *et al.* (1989) found only 10 adults, five young, and one nest with an egg at the colony March 30, 1988.

One of the incubating birds in January 1988 was banded (Fig. 2) and we hoped the band number might shed light on the bird's age. The bird, however, provided a remarkable sideline to the colonization. It had been found, with its wings and tail clipped, walking around San Francisco, California, in March 1979. It was rehabilitated with implant technology, then released on Midway Island in May 1979 (Bogue 1980). Nothing more was known until we found the bird incubating an egg on Guadalupe, nine years later!

Alijos Rocks. Laysans were first reported around Alijos Rocks in February 1976, and at least 15 birds were there, including displaying groups on the water, in January 1983 (Pit-

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Figure 2. Banded Laysan Albatross incubating egg on Isla Guadalupe, January 26,1988.

man 1985).

We visited Alijos January 29, 1988. At 6:30 a.m. no Laysans were present but soon they began arriving from the surrounding waters. By 7:30 a.m., 14 were soaring about the rocks, mainly South Rock, and when we departed at 8:30 a.m. at least 16 to 18 were present, including groups of up to 10 displaying on the water. Birds constantly soared around the rocks and often passed over them, feet dangling, while uttering loud whinnying calls. At 7:55 a.m. one bird landed briefly on Middle Rock and shortly after a second alighted atop South Rock; other birds stalled overhead in apparent attempts to land. These represent the first observed landings of Laysans at Alijos but there was no indication of nesting.

Isla San Benedicto. There are no historical records of Laysans from any of the Revillagigedo Islands (Brattstrom and Howell 1956, Jehl and Parkes 1982). The first record from the archipelago appears to be of two birds seen at 19°00'N, 111°00'W (*i.e.* between Socorro and San Benedicto) March 4, 1979 (Pitman 1985). Pitman (1988) reported three Laysans displaying on Isla San Benedicto in May 1987 but he was unable to visit the interior of the island (R. L. Pitman, pers. comm.).

We visited San Benedicto February 9-11, 1988, and found 11-14 Laysan Alabtrosses. Two were displaying to each other behind the main beach while a third bird sat some 40m distant. All other birds were in the island's interior: at the northeast corner, near the clifftop, one was sitting amid the bunch grass; the remaining seven to ten birds were atop ridges between the northern rim of the old crater and the valley below the raised northern part of the island. They comprised two displaying pairs, one of which was joined briefly by a third bird, and two singles. Of the two singles, one strongly defended a newly-made but empty nest scrape. In March 1988, S. F. Bailey (pers. comm.) and R. L. Pitman saw a similar number of Laysans on San Benedicto but found no eggs. On April 25, 1992, Howell and Steve Engel found nine to ten adult Laysans with two large, black, downy young amid bunch-grass at the northwest corner of the old crater, thus confirming breeding on San Benedicto.

Isla Socorro. Relatively few seabirds nest on Socorro which, unlike San Benedicto, is plagued with numerous introduced mammals (Jehl and Parkes 1982, Howell and Webb 1990). The only albatross record for Socorro is of a single bird we saw flying eastward along the cliffs of Cabo Henslow on February 16, 1990. It may simply have been a wanderer from San Benedicto, some 27 miles north-northeast of Socorro.

Roca Partida. Roca Partida, a small barren islet, rises abruptly from the ocean and appears unsuitable for nesting Laysans; we saw none at or near the rock February 18, 1988. However, A. M. Sada (pers. comm.) and party saw one Laysan Albatross near Roca Partida, May 4, 1990.

Isla Clarion. The most remote of the Revillagigedos, Clarion has been visited rarely by biologists, and there were no records of Laysans there before our visit. Although Everett (1988) reported no Laysans on Clarion in January 1986 he could have missed them (W. T. Everett, pers. comm.).

We spent February 19-22, 1988, on Clarion and found at least 30 Laysans, two of which were incubating single eggs (Howell and Webb 1989). One of the eggs was clean and apparently laid very recently. All birds were on ridges along the northwest slopes of Clarion. The majority of non-breeders was engaged in rigorous displays in groups of two to four birds, and several pairs seemed well established. In early May 1990, however, A.M. Sada (pers. comm.) and party found only four Laysans on Clarion, with no indication of nesting.

Other records. Our only sightings of Laysans away from the immediate vicinity of the islands were: March 3, 1988, when two flew southeast at 26°52'N, 114°07'W, *i.e.* about eight miles south of Punta Prieta, Baja California; and April 28, 1992 , when Howell and Steve Engel saw one associated with a large mixed-species feeding flock at 19°19'N, 106°W, *i.e.*

about 52 miles west-southwest of Chamela, Jalisco. We also visited Islas Los Coronados, January 20–21, 1988, but saw no sign of Laysans. At present they seem restricted to remote offshore islands.

DISCUSSION

While Laysan Albatrosses have been studied at established colonies, little data are available on colonization of new sites. Unfortunately, the newly-founded Hawaii populations have been plagued by feral dog predation, avian pox, and human building pressures and thus do not provide comparable data for growth at relatively undisturbed sites such as Guadalupe or San Benedicto. The naval personnel on Guadalupe said that Laysans had been returning for "eight," "five to six," or "several" years. As the normal term of duty on Guadalupe is one year, however, these comments probably were not based on first-hand knowledge.

Breeding adult Laysans exhibit strong, long-term site fidelity (Rice and Kenyon 1962b, Fisher and Fisher 1969) and it thus seems probable that the new colonies are being founded by young birds whose home islands have achieved maximum carrying capacity. Immature Laysans tend to return to their natal colonies at least two to three years before they breed, when they engage in displays and probably form pairs (Fisher and Fisher 1969). Assuming a similar period is required for pair formation at new colonies, the latest date for colonization of Guadalupe would be the 1983/1984 season, although birds were on land at Oahu, Hawaii, four years before the first eggs were laid (Pyle 1982-1988).

The high total of six young on Guadalupe in 1986 suggests that nesting attempts occurred there in previous years, although inexperience and failure of young birds may account for the decline from 12 eggs in January 1988 to five chicks and one egg in March 1988 Data on colonizations of other sites, and the record from infrequent observations on Guadalupe, suggest that Laysans arrived there in either the 1981/1982 or 1982/1983 season.

Laysan Albatrosses with young on Isla San Benedicto, April 25, 1992

Whether Alijos Rocks are suitable for nesting is unknown. Although Pitman (1985, citing Rice and Kenyon 1962a), and A.O.U. (1957) stated that Laysans have bred on Gardner Pinnacles (=Gardner Rock), in the Hawaiian chain, nesting there has never been confirmed (Rice and Kenyon 1962a). The stacks, like Alijos Rocks, may be just at the threshold of suitability for nesting.

Compared with breeding cycles in Hawaii and at Guadalupe, nesting chronology at Clarion in 1988 was late and, given the freshness of one egg, two pairs was a minimum breeding population. If, as Fisher and Fisher (1969) thought, the majority of displaying and paired birds at the colony relatively early in the season breed within the next two years, by the 1989/1990 season the breeding population at Clarion could have been as high as 14 pairs. The negative change between 1988 and 1990 almost certainly can be attributed to feral pigs which greatly interfere with ground-nesting seabirds.

In addition to the data from offshore locations we also are aware of five recent records in April and May from the northern Gulf of California (Newcomer and Silber 1989, R. LeValley, pers. comm.). There also are at least eight records inland in southern California and Arizona, presumably birds heading north from the Gulf of California. All have been between May and July, one in 1976, the rest since 1981 (McCaskie 1984, Rosenberg and Stejskal 1988). These likely are immature birds (adults should be feeding young at this season) and indicate that the Laysan Albatross is continuing to expand its range in the eastern Pacific.

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