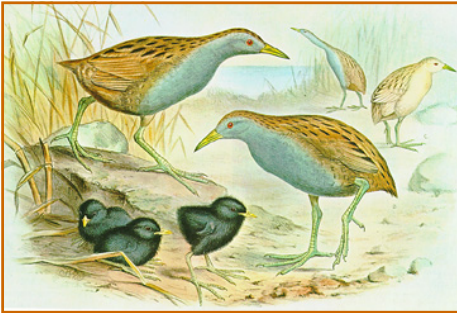


# EXTINCT BIRDS OF THE WORLD

## #9 THE LAYSAN RAIL

*Porzana palmeri*

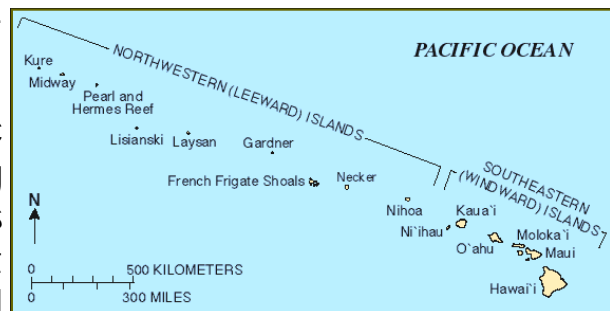


**LAYSAN RAIL**  
**FAMILY GROUP**  
Illustration from Rothschild (1893-1900)

The Laysan Rail or Laysan Crake was a tiny inhabitant of the Northwest Hawaiian Island of Laysan. This small island was, and still is, an important seabird colony, and sustained a number of endemic species, including the Rail. It became extinct due to habitat loss by feral rabbits, and ultimately the 2nd World War. Its scientific name honours Henry Palmer, who collected in the Hawaiian Islands for Walter Rothschild.

It was a small flightless member of the Rail family being just 15cm from the tip of the beak to the tip of the tail, (fully stretched out). The tail and wings had been reduced in the course of its evolution to a mere 2.5 and 5.4cm, respectively, and there were only eight primaries compared to ten in most other rails. The beak measured 1.8cm, and was strong and straight, while the legs were well-developed.

The Laysan Rail was an opportunistic feeder, their main fare being invertebrates such as moths, brine flies and blowflies, and their larvae; plant leaves, seeds, and eggs and seabird



carcasses were eaten when they were available. It was an aggressive bird and would fight off other species, particularly the Laysan Finch, these finches are very adept at breaking open seabird's eggs to consume the



**LAYSAN FINCH**  
*Telespiza cantans*

contents, while the rail was much less so. Consequently, Rails would linger around the seabird colony, on the lookout for finches that had just cracked open an egg, chase them away, and consume the egg's contents. On Midway, the rails were seen to steal food from domestic chickens. As no permanent freshwater exists on Laysan, the Rails must have been able to satisfy their needs from

the body fluids of prey and the content of eggs. Even so, they would eagerly drink, and bathe, in pools of water remaining after heavy rain, or from a pan of water provided by an observer.

Although it was flightless, it would use its wings to assist in keeping balance when running quickly and/or jumping. This way, they were able to

jump about a metre high (3 ft). They were agile and restless, retreating to the tussocks to avoid predators, but also to escape the midday heat. When threatened, they often hid in Petrel burrows. They were most active during the morning and late afternoon hours, but could regularly be seen all day and be heard calling at night. Laysan Rails had no natural enemies apart from occasional predation by Frigatebirds. All accounts remark on their fearlessness, it was widely reported that if an observer stood still, they would come right up to search for food scraps. One bird, when removed from its nest in an attempt to photograph the eggs, would immediately return to protect her clutch. The species was somewhat territorial during the breeding season. On Laysan, the carrying capacity was about 10-13m<sup>2</sup> (12-15 square yards) of habitat per bird. However, on Midway, population density was a quarter of this figure. In captivity, an enclosure of roughly 2m x 4m (6 x 12ft) was sufficient for two pairs, but the introduction of more birds into such an area would result in fighting.

On Laysan, courtship and the start of nest-building was in April, with eggs being laid from May to June; with the height of the nesting season being in June and July. The nests were placed on the ground, or at the base of a tussock; in the latter case the birds would rearrange dried leaves to form a roofed cavity, reached through a small tunnel about 15cm long. Nests were lined with soft dried plant material and seabird down. The usual clutch consisted of two eggs, sometimes three, as opposed to five to ten for related continental rails. The eggs were oval without being conspicuously more rounded on one end, and measured 31 x 21mm and were pale olive-buff in colour, irregularly marked with reddish-brown or purplish-grey blotches. The sexes mated for an entire breeding season, sometimes for life, and shared incubation duties, although the females appear to have spent more time on the eggs than males.

The young hatched after approximately twenty days, or a little less, in related species it is usually 16-20 days. The chicks were tended by both parents for about a month. Five days after hatching, the young were able to run as quickly as their parents. In 1941, one observer described a three-day-old chick as:

*"A black velvet marble rolling along the ground. Its little feet and legs are so small and move so fast that they can hardly be seen."*



Left: Nest and eggs.

Right: Brooding Rail.

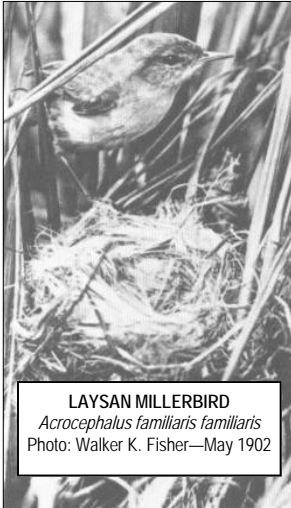
Both illustrations from:

*"Birds of Laysan and the Leeward Islands,  
Hawaiian Group"*

by Walter K. Fisher—1906.



Laysan is one of the most important seabird colonies in the United States. It shelters thousands of the Black-footed Albatross and Laysan Albatross, as well as many Shearwaters and Terns. The island was also home to five unique (sub)species of land and waterbirds, including the subject of this article.



LAYSAN MILLERBIRD  
*Acrocephalus familiaris familiaris*  
Photo: Walker K. Fisher—May 1902

The extinction of this Rail is particularly unfortunate as it could have been so easily avoided. It was initially threatened when rabbits were introduced to Laysan. With no predators to control their numbers these pests soon ate the entire vegetation cover on the island, turning it into a barren dust bowl, causing the extinction of both the Laysan Millerbird and the Laysan 'Apapane (both subspecies endemic to the island). However, the Laysan Finch and Laysan Duck both managed to survive. In the 1900s, when the rabbit vegetation destruction had just started, the Rail's population was at full carrying capacity of around 2000 mature birds; it remained so until at least the early 1910s, but declined thereafter. In 1923, only two birds could be found on Laysan, and of eight that were on that occasion brought back from Midway, at least two died almost immediately from lack of food and shelter. The species is believed to have become extinct on Laysan during 1923, probably because no nesting habitat remained to sustain the population.

However, the story did not end there. The Rail had been introduced to Eastern Island in Midway Atoll in 1891, and to Sand Island between 1906 and 1908, and had thrived on both. In 1929 an attempt to introduce it to Pearl and Hermes Atoll failed for lack of habitat to provide shelter from storms. An attempt in 1913 to transplant a population to Lisianski Island, where as on Laysan introduced rabbits were destroying the vegetation, also failed. The first attempt to reintroduce the species to Laysan was not successful either, as rabbit eradication had only just been completed, and the vegetation not fully recovered. At a later date, moves were made to both re-introduce the Rail to its old home, where the vegetation had made a comeback, and to take some to the main islands of Hawaii, along with Laysan Finches, to form an experimental population. Such a move would have safeguarded the species. Rails were collected for this, but the idea was held up by red tape. Some members of the United States Bureau of Biological Survey were concerned that the Laysan Finch, might escape on the main islands, and become a serious pest. The movement of the rails was therefore held up because of concerns about the finch. The population on Midway survived until the Second World War, but in 1943 disaster struck

when a US Navy Landing Craft accidentally broke free and drifted ashore, enabling onboard rats to colonize the islands, and by the end of 1944, the Laysan Rail was no more. As a final irony it was Warden Ed Caum who documented the last recorded sighting of a Laysan Rail...the very man who refused their export to Honolulu.

Reference: Wikipedia

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