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JAPANESE ECONOMIC EXPLOITATION OF CENTRAL PACIFIC SEABIRD POPULATIONS, 1898–1915

Dirk H. R. Spennemann
The Johnstone Centre,
Charles Sturt University
Albury, Australia

At the turn of the century, Japanese feather and plumage hunters visited most of the isolated, uninhabited atolls of the central Pacific Ocean. The seabird populations of these atolls were decimated to supply exotic feathers for the millinery market to meet an increasing demand created by the European fashion industry. Drawing on scattered archival records, this article reviews the history and dimensions of the feather trade in the Central Pacific and describes the responses of the affected nations.

THE REDUCTION OF SEABIRD POPULATIONS is the subject of much discussion at present. The declines are caused by the destruction of breeding habitats on the one hand and the impact of longline fishing on the other (especially on albatrosses; see Brothers 1991; Alexander, Robertson, and Gales 1997). Resource exploitation and urban as well as recreational development have a corollary impact caused by careless and shortsighted resource management techniques. Yet, at the turn of the century the single most serious threat to the survival of these birds took the form of fashion. All through Europe, and later in the United States and Australia, women's hats were adorned with exotic feathers. To satisfy demand for such feathers, plumage hunters increased the range of their activities and several Central Pacific islands were almost stripped bare of their bird populations.

In a recent publication Pamela Swadling has reviewed the history of the plume trade in Southeast Asia (1996), especially as it affected New Guinea, and has demonstrated that it had considerable antiquity. The demand for feathers to adorn headgear in Southeast and Central Asia was soon sur-

passed by the demand of the European fashion industry. But it was not only the spectacular plumage of the bird of paradise that was sought after. The millinery industry also needed quantities of feathers for cheaper hats for the masses, as well as for applications as mundane as filling pillows and bedspreads. To satisfy these demands, less-glamorous bird species were subjected to predation—almost to the verge of local extinction. In this article I will review evidence of Japanese plumage collecting on Central Pacific atolls and islands, and will place it into the wider context of the early twentieth-century plumage trade.

Many small Central Pacific atolls had never been continually inhabited, for several good reasons: they were prone to storm damage, the rainfall and thus freshwater supply were too small to sustain continuous human life, and land area was too small to establish food gardens. Thus these islands provided ideal undisturbed breeding grounds for seabird populations. Laysan albatrosses *(Diomedea immutabilis),* tropic birds (*Phaethon* spp.), frigate birds (*Fregata major* and *F. minor*), boobies (*Sula* spp.), terns (mainly *Sterna fuscata* and *Gygis alba*), and the like frequented the islands, where they were largely free from predation with the exception of the occasional short-term incursion by the local islanders who hunted them for a few eggs, bird skins, and feathers for the local subsistence economy and to adorn items such as canoes (Eisenhart 1888; Krämer and Nevermann 1938). These incursions were commonly small scale, with small if not negligible impact on bird populations.[1]

By 1900 this changed dramatically: in the European fashion industry the demand for feathers and plumes had increased, and some of the far-flung and unpoliced atolls of the Pacific Islands were the perfect procurement grounds. The effect of these operations on the seabird populations was disastrous. Birds were killed in the millions and entire islands were turned into enormous slaughterhouses.

The Central Pacific comprises a number of major island groups, such as the Bonins, the Volcano Islands, the Marianas, the atolls of the Marshalls and Kiribati, as well as the atolls and high islands of the Hawaiian chain. In addition, there are some isolated islands, such as Marcus and Johnston. Further to the southwest are the Palau group and the Carolines, with the high islands of Chuuk (Truk), Pohnpei, Kosrae, and their outlying atolls. Of these groups, many of the northern islands are in a zone of limited rainfall and with their small and shallow groundwater lenses are not very suitable for sustaining permanent human settlement.

Even coconut palms, the prime crop at the turn of the century, would not thrive on these islands despite planting attempts, such as by the U.S.S. *Supply* on Eneen-Kio (Wake Island) in 1912 (Bryan 1959:4) and on Laysan

with nuts imported from Jaluit Atoll (Olson 1996:117; Ely and Clapp 1973). Thus, these atolls were of limited economic importance after their guano deposits (if any) had been mined (such as on Laysan)—and law enforcement actions by the colonial powers were few and far between. Unannounced activity on these islands was likely to succeed unnoticed, unless the perpetrators were surprised by the traditional users of the islands in pursuit of a similar activity. Such was the case with Bokak Atoll, which will be discussed below.

The Millinery Trade

At the turn of the century, great demand existed for feathers. The millinery industry of France set the fashion styles, which were followed by milliners throughout Europe. During the latter part of the nineteenth century European fashion, copied in the Americas and Australia, saw increasingly elaborate feather ornaments on women's hats (Swadling 1996:84–87). Although the bird of paradise was the prime species sought after, and the most expensive, the demand for exotic feathers and entire plumages was so great that many other species were also harvested. As the fashion descended the socioeconomic ladder, the market for such hats expanded manifold and the demand for less-expensive exotic feathers increased (Doughty 1975). The use of ostrich feathers is well documented, as is the use of feathers of "osprey," which over time became the generic term for a wide range of exotic feathers largely collected from seabird populations. Seabird exploitation had just been banned within the limits of the continental United States and the industry turned to other countries to provide the goods required (Wetmore 1925:96).

The German government established a set of regulations governing the hunting for birds in German New Guinea and regulating the trade in the Marianas through a concession company (see below). In the Pacific atoll trade, the main species predated were the Laysan albatross, black-footed albatross, frigate birds, tropic birds, sooty terns, masked boobies, and almost all minor tern species.

The beginning of Japanese birding expeditions is unclear. It is quite likely, however, that they were the result of the 1882 cruise of the Japanese-chartered, American-owned schooner *Ada* to French Frigate Shoals (Amerson 1971:40), Pearl and Hermes Reef (Amerson, Clapp, and Wirtz 1974), Laysan Island (Ely and Clapp 1973:22), and Lisianski Island (Clapp and Wirtz 1975). The charterers of this vessel caught sharks (for oil, flesh, and fins), a large quantity of turtles, bêche-de-mer, and bird down (Hornell 1934). The expedition may have alerted other Japanese to the profitability of the trade in the off-season from fishing. Other channels of information occurred

through several Japanese traders who operated stations in Micronesia, such as the trepang stations on Wotho and Ujae Atolls in the Marshalls (Jeschke 1906:274). In autumn 1885 Suzuki Tsusenori set out in a Japanese government-sponsored expedition, again in the *Ada,* to the Marshall Islands; and in spring 1887 he conducted another expedition, this time aboard the *Chushin Maru,* visiting the Northwestern Hawaiian Islands from Kure Atoll to French Frigate Shoals (Peattie 1988:11). On return he recommended that the Japanese government annex these islands. His account seems to have created substantial interest in Japan and certainly contributed to the knowledge of their natural and environmental resources (ibid.:13). Further, there were Japanese workers employed on contract in the guano works on Laysan in 1900 (Ely and Clapp 1973:35).

In 1891–1892 the *Ada* again sailed for the Northwestern Hawaiian Islands, where the crew collected turtles and the down of albatross chicks, at least on Laysan and Pearl and Hermes Reef but possibly on all islands visited (Harrison 1990:35).

In April 1909 the American vice-consul in Japan reported an article in a Japanese newspaper that stated that a number of Japanese vessels, seven of which were listed, had visited the Northwestern Hawaiian Islands in late 1908 and early 1909. The letter mentions that these vessels had left Japan on the pretense of deep-sea fishing, but that their real objective was gathering bird skins and feathers on the uninhabited islands.[2]

An article, originally published in the *Japan Times* and reprinted in the *Pacific Advertiser* of 20 April 1909, shows a common cover story employed in the birding trade: the *Sumiyone Maru,* which had sailed for shark fishing in Hawaiian waters in late November 1908, had been disabled by a storm and drifted to Laysan Island, where it arrived on 4 January 1909. About four weeks later eighteen shipwrecked sailors had been "rescued" from that island by the *Niigata Maru,* which had drifted under similar conditions. Both ships had been listed by the American vice-consul as feather-poaching vessels. On Bokak, to provide another example, the Japanese claimed they had "discovered" the island and assumed it to be in Japanese territory. When shown the German flagpole painted in the German imperial colors of black, white, and red and upon reviewing a map of the Marshall Islands, they agreed to being on German soil but then claimed that they had paid a license fee to the Jaluit Gesellschaft (Flower 1909). The need for pettiness and such elaborate cover stories shows that feather poaching was considered by the Japanese operators a doubtful enterprise if not illegal, even before the Northwestern Hawaiian Islands became a bird reservation in 1909.

The materials collected by Japanese crews in the Pacific were landed in Yokohama, classed, and transhipped to the main markets. The main markets for the feather trade were Hamburg, London, and Paris. The North American

(New York) as well as the Australian markets were influenced by Europe. Other substantial markets for the millinery trade were China, Nepal, and Turkey, which were independent of the European fashion industry and had in fact a greater history of feather use (Swadling 1996:59ff.).

Japanese Birding Operations in the Central Pacific

Given the demand for feathers, it is not surprising that various raids have been reported in the literature. Good summaries of the feather trade have been provided by Ely and Clapp (1973) for Laysan Island and by Clapp and Wirtz (1975) for Lisianski. The bird populations on Nihoa and Necker Islands as well as Gardner Pinnacles were spared (Clapp and Kridler 1977; Clapp, Kridler, and Fleet 1977; Clapp 1972), most likely because of arduous access. In the following I will look at the Japanese birding operations at French Frigate Shoals, Kure, Laysan, Lisianski, and Midway as well as Pearl and Hermes Reef in the Hawaiian chain; Marcus, Eneen-Kio, Bokak, and Johnston in the Central Pacific; Christmas Island in the southeastern Pacific; and Pratas Island near China (Figure 1).

Bokak Atoll

Bokak is the northernmost atoll of the Marshall Islands. At 14°32′ N and 169°00′ E, it is located in a zone of very low rainfall (about twelve hundred millimeters per year), which is too little to sustain gardening for food production or to establish a groundwater lens large enough to be capable of sustaining human life.

Eleven Japanese bird catchers were encountered by a group of Marshallese who traditionally came to Bokak to collect feathers. The German government administrator, Wilhelm Stuckhardt, arrested the perpetrators in May 1909. A report in the Japanese newspaper *Jiji* (3 July 1909), written after the arrests, claimed that a first group of seventeen bird catchers was dropped on Bokak in March 1908. This crew was exchanged on 23 August 1908, when eleven new crew members were dropped off, with three of the initial group remaining. About 200,000 processed bird plumes or sets of wings were taken back to Japan. According to the interrogation of the arrested Japanese, however, the second group began its operations on 29 August or 1 September 1908, when the men were dropped by the seventy-five-ton schooner *Hokio Maru.* Departing Yokohama on 9 June 1908 the ship apparently had sailed directly to Bokak Atoll. During the second group's stay on the atoll from August or September 1908 to the arrests in May 1909, three of the hunters died on the island of unspecified causes and were buried there (*Jiji,* 3 July 1909; Stuckhardt 1909b).

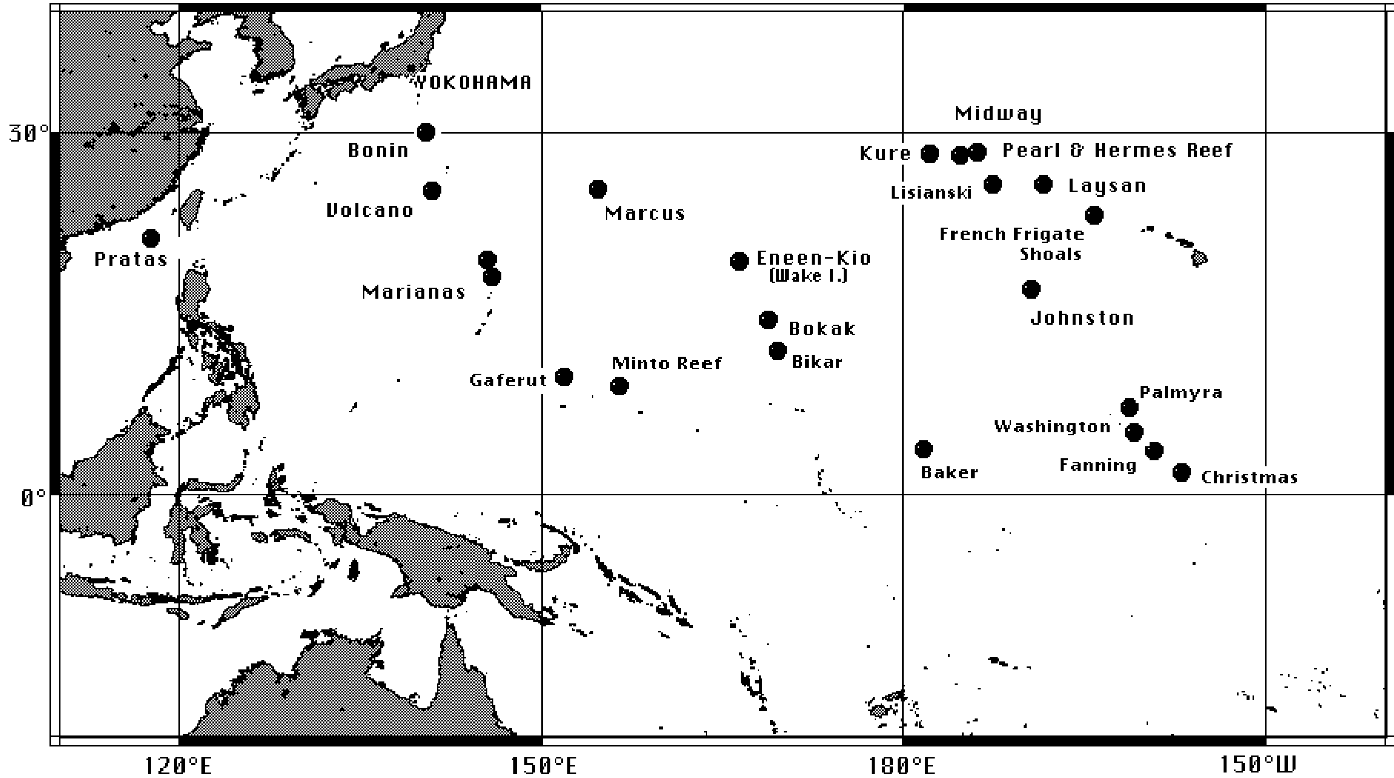

FIGURE 1. **The Central Pacific, showing locations discussed.**

It appears that the foreman, Soitiro Saito, was paid a monthly wage of ¥15 and a percentage of the profit, while the bird catchers were paid solely based on the number of bird plumes (at ¥0.15 per plume) and pairs of bird wings (at ¥0.02 per pair) they collected. Although the *Jiji* article claimed that the vessel had set sail for Minami-Torishima (that is, Marcus Island; see below), Saito said the Japanese trader had sent the crew knowingly to Bokak Atoll for an anticipated duration of six months (until February 1909). All the arrested Japanese believed—at least officially—that Bokak was actually Japanese-owned. The ship had landed all the necessary provisions, tools, and building materials to erect a plumage hunting and processing base on Bokak (Stuckhardt 1909a).

The small settlement Stuckhardt encountered on Bokak was composed of one living house built from wood and corrugated iron sheeting, a living and cooking house, a building for provisions, a work shed, and a storage shed for processed bird skins. The latter three buildings had been built from local materials in a style similar to Marshallese houses. In addition, there was an iron storage tank for rainwater. According to the Japanese crew members there were plans to replace the temporary buildings with more-substantial ones upon the arrival of new building materials on a Japanese supply ship, expected in July 1909. These plans indicate that the bird population was deemed worthy of at least another season of exploitation. It can be assumed that once Bokak Atoll had been depleted, the likewise uninhabited atoll of Bikar, some 250 kilometers to the south, would have been targeted.

To facilitate the movement of the bird hunters between the various islets of the atoll, and to be able to conduct offshore fishing both for salting and for their own consumption, the Japanese operated a small sampan with sails (Stuckhardt 1909b).

In total three crates of coral, eighteen crates and eight bales of plumes, and ten crates and sixteen bales of wings and feathers were confiscated by Stuckhardt (1909c). The majority of the birds killed were tropic birds and frigate birds. According to statements made by the arrested Japanese, they had prepared a total of 72,400 bird skins and an additional 84,760 pairs of bird wings, not all of which were removed by Stuckhardt (Begas 1909). In addition, 783 pounds of rice were confiscated by Stuckhardt, which contradicts the claim made in the *Jiji* that the Japanese were starving to death.

French Frigate Shoals

French Frigate Shoals, a group of low coral-sand cays located at 23°46′ N and 166°16′ W, is part of the Hawaiian chain. Like the other Northwestern Hawaiian Islands, French Frigate Shoals was visited in 1882 and in 1891 by

the *Ada* and it is likely that during that time birds were taken (Harrison 1990:35). The Tanager Expedition of 1923 encountered the remains of a Japanese tent camp, which Alexander Wetmore, ornithologist on the expedition, describes as stakes and other refuse as well as "a cache" including a "hammer, saw, nails, ship's compass and other similar articles . . . wrapped in a sail and thrust under a log" (Wetmore diary, 25 June 1923; Olson 1996:85). Based on the state of preservation of the canvas it was assumed that the camp had been abandoned sometime in late 1921.

Kure Atoll

At 28°25′ N and 178°29′ W, Kure is the northernmost atoll at the northwestern end of the Hawaiian chain. The atoll encompasses a lagoon of forty-six square kilometers but supports only two small sand cays. Plumage collecting is reported for Kure in the late 1890s (Woodward 1972:8). The atoll was likely visited in the years between 1900 and 1909 as well, as law enforcement visits to the area were very limited.

Laysan Island

Laysan Island in the northwestern Hawaiian chain, located at 24°7′ N and 171°53′ W, some eleven hundred kilometers northwest of Honolulu, is an atoll with a slightly elevated landmass. The island is an important rookery for monk seals as well as seabirds. The first contingent of Japanese plumage collectors was not encountered until 1899, by the U.S. government survey vessel *Nero* (Pomeroy 1951:30; Hill 1901), even though the collecting of feathers and albatross chick down is documented for the *Ada* as early as 1891 (Harrison 1990:35).

In the already mentioned April 1909 letter by the American vice-consul in Japan, the consul reported that seven Japanese vessels had visited Laysan between October 1908 and January 1909. The vice-consul also reported that another vessel, the *Niigata Maru,* was planning to sail again for Hawai‘i.

In January 1910 the U.S. Coast Guard revenue cutter *Thetis,* under the command of Captain W. V. E. Jacobs, surprised and apprehended fifteen Japanese on Laysan and eight on nearby Lisianski engaged in killing birds.[3] It appears that one lot of plumes had been shipped just before the *Thetis* arrived (Jacobs 1910; Wetmore 1925:86). An earlier crew had been operating between April and August 1909, when nine crew members had been repatriated and replaced by nine fresh bird catchers, who were among those arrested by Jacobs. A vessel with yet another relief crew arrived in late July 1910 (Anonymous 1910h).

According to a Japanese newspaper report, between April 1909 and 18 January 1910 more than 140,000 birds had been caught (*Hochi,* 22 February 1910, quoted in NLA 1910). The catchers were in the employ of the Yamaguchi Marine Bureau and had departed Shinagawa on 2/3 April 1909, arriving on Laysan on 17 April, where fourteen bird hunters were dropped off. The ship then proceeded to Lisianski, where another nine men were left. The Japanese newspapers claimed a German named Max Schlemmer was involved, having "sold" the Japanese the lease for the islands (Anonymous 1910c; *Japan Herald,* 7 March 1910; *Hochi,* 22 February 1910). In total, thirteen buildings were erected on Laysan. The catching methods caused a substantial stir in the wider community, as the Japanese were reported to have cut off the wings while some of the birds were still alive and then left them to their fate (Anonymous 1910c). Other birds were caught with a long pole, stunned or killed, and then processed.

The quantity of bird feathers collected is staggering. Between mid-April and August 1909 a party of fifteen Japanese had collected and shipped (on the *Tempou Maru* on or about 10 August 1909) from Laysan approximately thirty bales (about one ton) of feathers and seventy bales of wings (Jacobs 1910). At about 1,830 wings to the bale these seventy bales would amount to 128,100 wings, or more than 64,000 birds (Ely and Clapp 1973:39). In January 1910 the poachers—probably the team that had arrived on 10 August—were arrested by Jacobs in the *Thetis.* Jacobs was able to confiscate sixty-five bales of wings, twenty-eight large and three small bags of feathers, thirteen bales of feathers, and two boxes of stuffed birds. This amounted to about one ton of feathers and almost 120,000 wings. Another 800 pounds of feathers and 63,500 wings were found weighed down under two hundred (!) mats but, because they were insufficiently cured for transport, had to be destroyed by Jacobs. Thus, in one year on one island alone, some two and a quarter tons of feathers and more than 310,000 wings had been collected. It can be estimated that some 150,000 birds had been killed on Laysan (Jacobs 1910).

In addition to feathers and wings, the eggs of the albatross were exploited on a large scale. An example of this is reported for Laysan in 1903 (Harrison 1990:37).

Laysan was again raided by poachers in late 1914 and January 1915. A shore party from the *Thetis* found between 150,000 and 200,000 bird carcasses. The species targeted had been the Laysan and black-footed albatrosses, as well as frigate birds and masked boobies. Most had their breast feathers and wings missing (Munter 1915:138–140). When the Tanager Expedition visited Laysan in 1923, Wetmore mentions in his diary the large quantity of bird-bone deposits found in both the beach sand and the intertidal zone (Wetmore diary, 2 and 12 May 1923, in Olson 1996:49, 56).

Lisianski Island

Lisianski belongs to the Northwestern Hawaiian Islands and is located at 26° N and 173°57′ W, some two thousand kilometers northwest of Honolulu. The first record of poachers dates from 1903, when the crew of the USS *Iroquois* found Japanese feather poachers on Midway and Lisianski (Rodman 1903). On 8 January 1904 thirty-eight Japanese were landed on Lisianski from the *Yeiju Maru* (which was eventually wrecked there). Another thirty-nine Japanese were put ashore in February by the *Tiyo Maru.* Both crews were seen by the *Iroquois* on 11 April 1904 (*Pacific Commercial Advertiser* [Honolulu], 16 April 1904) and arrested by the *Thetis* in June 1904, acting on information received from the *Iroquois* (Hamlet 1904). The *Thetis* encountered feathers and cured wings of sooty terns equivalent to approximately 284,000 killed birds.

In concert with the arrest of poachers on nearby Laysan in January 1910, the revenue cutter *Thetis,* under the command of Captain W. V. E. Jacobs, surprised and apprehended eight Japanese on Lisianski. The men were engaged in killing birds and the Japanese settlement there comprised four buildings. According to Captain Jacobs's account, two crews each (one after another) had been operating on Laysan and Lisianski between April 1909 and January 1910, when the later of the two were arrested by Jacobs (1910). As on Laysan, it appears that one lot of plumes had been shipped off on a relief vessel just before the *Thetis* arrived (Jacobs 1910; Wetmore 1925:86).

On Lisianski, Jacobs confiscated nineteen bales of bird feathers, one box of stuffed birds, and one box and sixty-five bags of bird wings. The total number of birds killed was estimated to be 140,000. The earlier relief vessel, which had arrived in August 1909, was estimated to have taken away approximately 108,000 wings (Anonymous 1910g). Yet another vessel arrived in late July 1910 (*Honolulu Evening Bulletin,* 6 August 1910).

Like Laysan, Lisianski was visited by Japanese poachers yet again in late 1914 and early 1915. One and a quarter tons of feathers and some 230,000 wings—equivalent to another 115,000 birds—had been collected on Lisianski. Some had been shipped on the schooner *Tempou Maru* and some was confiscated by the *Thetis* (Munter 1915).

The 1923 Tanager Expedition encountered a Japanese camp on Lisianski, which comprised remains of a roof (about nine meters by three and one-half meters) and other structures, an array of oil tins possibly used for water storage, and the remains of three boats. Based on the decay observed, the camp had been abandoned at least seven to eight years before the expedition arrived (Wetmore diary, 19 May 1923, in Olson 1996:63).

Midway Atoll

Midway belongs to the northwestern Hawaiian chain and is located at 28°12′ N and 177°22′ W, more than two thousand kilometers northwest of Honolulu. The nearly circular reef platform was studded at one time with small sand cays, which totaled five and a half square kilometers, but now comprises only three islets. In 1891 George Munro, surveying Midway Atoll, found no albatrosses, boobies, wedge-tailed shearwaters, or tropic birds on Sand Island (Munro 1960), a lack that Harrison (1990:35) attributed to exploitation by castaway sailors stranded there during the nineteenth century. In view of the documented rates of recovery of bird populations during the twentieth century (see ibid.:56ff.), this depletion was more likely the result of plumage collection activities, as nearby Kure Atoll had also been targeted about that time (Woodward 1972:8).

A naval vessel encountered six Japanese residing on Midway in 1901, engaged in feather collection (Hill 1901). In 1902 a visitor to Midway found both Sand and Eastern Islands thickly strewn with thousands of bodies of wingless and tailless seabirds (Harrison 1990:36). The next mention of bird collectors on Midway occurs for 1903, when the crew of the USS *Iroquois* found Japanese feather poachers working on Midway and Lisianski (Rodman 1903). Finally, one of the Japanese bird hunters arrested in 1911 on Christmas Island (see below) mentioned that over a million birds had been caught by another crew on Midway Atoll in 1910 (Bailey 1977:40–41).

Pearl and Hermes Reef

Pearl and Hermes is a large atoll, located at 27°47′ N and 175°51′ W, some two thousand kilometers northwest of Honolulu. The classical atoll encompasses a large lagoon with a circumference of seventy kilometers. While no Japanese feather collectors were ever encountered on the atoll, patrol vessels are reported as having found evidence of Japanese bird-catching activities (Harrison 1990:36). The Japanese-chartered schooner *Ada* collected twenty kilograms of albatross chick down on Pearl and Hermes Reef in 1891, which according to Harrison probably accounted for all chicks on the atoll (ibid.:35).

The 1923 Tanager Expedition investigated the atoll and Wetmore noted in his diary that they encountered the remains of a Japanese tent camp replete with refuse. Under a nearby pile of coral rocks the skeleton of a Japanese male aged about twenty to twenty-five years old was excavated. Based on the observed decay the body had been buried some three to eight years earlier. Wetmore assumed that the burial and the camp were the remains of a

wrecked sampan (Wetmore diary, 28 April 1923, in Olson 1996:46). The site can also be interpreted as the remains of a Japanese birding camp, which, if the estimate of three to eight years abandonment is anything to go by, would imply use possibly in 1914 or 1915, a period for which activity on Lisianski and Laysan is documented.

Marcus Island

Marcus, at 23°10′ N and 154° E, lies approximately 870 nautical miles northwest of Eneen-Kio. Japanese fishermen had been using the island since the mid-1890s on a regular basis (Bryan 1903). Taking advantage of the weakness of the Spanish government after the Spanish-American War of 1898, Japan annexed Marcus Island outright in May 1899 and retains it to the present day (Anonymous 1899; Pomeroy 1951:30). It would appear that almost immediately after annexation plumage collectors began to decimate the bird population. Japanese plumage collectors were seen on Marcus by an American vessel in 1902, continuing the hunt even though the number of birds caught had become extremely small (Bryan 1903). Bryan mentions that the main species targeted during that year was sooty tern.

In 1902 thirty Japanese engaged in the bird processing on Marcus, with a clear division of labor. There were collectors and there were taxidermists. From March to September 1902 some 50,000 sooty terns were killed. White terns were also collected, but less frequently as they required more care in killing and preparation if the skins were not to be ruined. White tern skins were reported to be more valuable, however, making the extra effort worthwhile.

In 1902 only one albatross *(Diomedea immutabilis)* was seen by Bryan. Reportedly the entire colony had been wiped out in the six years prior to 1902. In processing, the wing feathers were pulled out separately and the breast feathers plucked out. The bird carcasses had then been boiled down and, barreled, shipped to Japan as fertilizer. By 1901 boiling down the carcasses was no longer profitable and the birds were killed for their feathers alone. During peak exploitation, one catcher could kill 300 birds in a day. Heaps of bleached bones were found all over the island (Bryan 1903).

Eneen-Kio Atoll (Wake Island)

Eneen-Kio, located at 19°17′ N and 166°37′ E, is the northernmost atoll of the Marshall Islands chain; it is currently occupied by the U.S. government. Because of its remote location the atoll—annexed by the United States in 1899 (Anonymous 1898; Taussig 1935)—was only infrequently visited by U.S.

naval vessels (see Spennemann 1990b for a compilation of ship visits). At the time of annexation no sign of human habitation was found, which would provide a *terminus post quem* for the onset of Japanese birding on the atoll.

The first Japanese there were observed in June 1902, when the U.S. Army transport *Buford* stood off the atoll and was met by a launch putting off the island. The launch contained eight Japanese, who claimed that they had been left on Eneen-Kio some two months earlier by a Japanese fishing schooner out of Yokohama and that they were fishing on the island. The *Buford's* master, A. Croskey, suspected that the Japanese were pearling rather than fishing but did not take any action (Croskey 1902). Japanese were next seen by Rear Admiral Evans, who visited the island on 6 February 1904 with the USS *Adams.* Apart from collecting feathers the Japanese were noted to be catching sharks for their fins (Leff 1940:23; Dewey 1906). Shacks and graves of Japanese fishermen, but apparently no poachers, were noted by General J. J. Pershing, commanding the U.S. Army transport *Thomas* in January 1906 (Green 1938; Heinl 1947:66).

By the time of the next U.S. visit to the island, by the USS *Supply* in 1912, no evidence of Japanese feather collectors was found (Bryan 1959:4). However, though not discovered until 1923, an inscription in the bunkhouse of a Japanese plumage-hunter base on Peale Islet (part of Eneen-Kio Atoll) was dated 13 November 1908, stating that the island had been left by the crew on that date (ibid.). Between 1913 and 1922 apparently no U.S. vessel stopped at Eneen-Kio; again, bird hunting could have gone on undetected.

The Tanager Expedition of 1923 encountered evidence of semitemporary or longer-term settlements on Eneen-Kio, apparently of Japanese origin (Bryan 1942, 1959:4; Heine and Anderson 1971). Three camps were encountered, one on the eastern end of Wilkes Islet, one on the northwestern end of Wake Islet, and one on the eastern end of Peale Islet. From the remains the camps appear to have been established by Japanese poachers collecting seabird feathers. To date it cannot be established whether the camps were contemporaneous or were built on separate occasions. The Bernice P. Bishop Museum holds a number of photographs of the Japanese camps, some of which have been reproduced in the recent publication of Wetmore's diary (Olson 1996).

The Peale settlement had first been seen by the crew of the submarine tender USS *Beaver* in 1922 (Picking 1922a, 1922b). The *Beaver's* commander, Lieutenant Commander S. Picking, mentions in his report that

> several huts were seen across the lagoon and these proved to be deserted huts which evidently had been used by Japanese who had visited the island for birds, fish or pearls. We found a number of

> sake jars, all of which were empty, and a large still which had been unfortunately used only for distilling water. The Japanese poachers camp at the east end of the northwest island [Peale] was roofed with corrugated iron, gutted and fitted with cistern boxes and earthen vessels. (1922b)

The Tanager Expedition of 1923 found a single wooden shack, a grave, and a shrine on Wilkes Islet. The camp on Peale was far more extensive. It is described in the diaries of Alexander Wetmore (30 July 1923, in Olson 1996: 106–107) and of Edwin Bryan. Bryan assumed the camp to be fourteen or fifteen years old and described it as follows:

> "The camp consists of the remains of two large frame buildings with galvanised iron roofs, about 18 feet wide, one 20 feet long, one 30 feet long; two smaller buildings; one tank, and one storehouse, raised on posts which are guarded with tin. Scattered were a number of barrels, boxes, two large clay water jars, tin cans and metal kettles. Saw part of a Sydney newspaper, a pile of oakum, bamboo frame with lath trays. There was also a boat, a little larger than a skiff. Made a copy of a Japanese inscription inside the bunk house." Later this was translated to read something about leaving the island with the date, November 13, 1908. (Diary entry with annotations, published in Bryan 1959:4)

Although most of the equipment seen on Peale by crew of the *Beaver* and members of the Tanager Expedition was of Japanese origin, there was some evidence of non-Japanese visitors among the poachers. In addition, the Tanager Expedition found a forty-five-foot boat that had been cut into three parts cached under some scrub (ibid.). Wetmore describes a third camp, this one located on Wake Islet, as follows:

> Later I visited the site of an old Japanese camp on the lagoon side of Wake Island near the channel separating that islet from Peale Island. A clinker-built boat 35 or 40 feet long that had been sawed straight through into three nearly equal parts lay partly buried rotting in the sand. English letters were indicated across the stern but the paint had scaled so as to make them illegible. Near at hand was a stone fireplace and a few upright sticks that had supported some form of shelter. Scattered about was the usual camp refuse—some broken bottles, chipped and broken bits of dishes of Japanese design and bits of metal. The camp apparently was eight or ten years old if

> not more. It might appear that men had desired for some reason to conceal their boat and had to cut it to make it possible to draw it out of the water. It was hauled back among heavy bushes nearly 100 yards from the shore. (Wetmore diary, 5 August 1923, in Olson 1996:114)

Near the Wilkes camp was a small Shinto shrine (Heine and Anderson 1971), composed of pieces of rough lumber set in coral mounds and a fifteen-meter-long coral-lined path leading to a central column:

> At the center on the west is a square column of rock four feet square by five high. West of it are four smaller columns of rock about two feet high. East of it are twelve more small columns perhaps more. Some of the columns have a square wooden post at the center, four inches square by 4 or 5 feet long with three notches cut around at the top. Others had three thin boards with angular pointed ends stuck in them. The three largest boards are in the largest shrine, one of them having a series of Japanese ideographs on it. A few bottles and bits of porcelain dish and *Tridacna* shells placed at the bases of the shrines may have contained offerings. (Wetmore diary, 31 July 1923, in Olson 1996:108–109)

By 1935 little remained of the Japanese camps. Remains of a boat and some pottery, some building remains, as well as fragments of the still and the stone alignment of the Shinto shrine were seen by a Pan American Airways work party that arrived that year to build a flying-boat station (Wood 1935; Grooch 1936:95).

Johnston, Christmas, Pratas, and Other Islands

Johnston Atoll, at 16°45′ N and 169°39′ W, lies between the Marshall Islands and Hawaiʻi. It was visited by the Tanager Expedition in 1923, which encountered evidence of past plumage collection, namely the "remains of several thousand Sooty Terns, Wedge-tailed and Christmas Island Shearwaters . . . complete except for the hand" (Wetmore diary, 13 July 1923, in Olson 1996: 96). In addition the remains of a European-style hut and an abandoned fishing camp were also found.

Christmas Island, located at 1°59′ N and 157°32′ W, belongs to the Line Islands, today part of Kiribati. On 25 February 1911 the HMS *Algerine,* Captain A. K. Jones commanding, was making a routine call to the island to "show the flag" and reaffirm British ownership when it encountered a group

of thirteen Japanese men collecting plumage. They had been landed a month previously by the schooner *Toba Maru* and had already caught 11,000 birds. The *Algerine*'s captain arrested the men and took them to Fanning Island. Seven were returned to Tokyo while six found employment with Father Rougier, at that time owner of Fanning and Washington Islands (Bailey 1977: 40–41). It would appear that no further action was taken.

Japanese poaching also affected islands other than those of the Central Pacific, including Pratas Island in the South China Sea. Concurrent with the expansion of the plumage collectors into the Central Pacific came a move into Southeast Asia. The German consul in Hong Kong, in an aside in a memorandum to the German Foreign Office, stated that Japanese plumage collectors had established a base on Chinese-owned Pratas Island (Tung Sha Do, 20°43′ N, 116°42′ E) in 1908 and had been surprised there by the Chinese. The so-called Pratas Affair attracted substantial regional and international media attention and severely strained Sino-Japanese relations (see *The Times*, 25 June 1909, 5; 3 August 1909, 5; 12 October 1909, 3).

Micronesia, especially the central Caroline Islands, has an abundance of small atolls, many uninhabited. One such is Minto Reef (8°9′ N, 154°18′ E), where a large nesting seabird population was found to be substantially reduced in 1906. At the time the decimation was attributed solely to the Good Friday typhoon of 1905 (Berg 1906). The likewise uninhabited Gaferut (Grimes, 9°15′ N, 159°40′ E) was reported to have had a very large seabird population (Senfft 1905). It is quite likely that additional Japanese activities went unnoticed.

It has also been documented that plumage collectors exploited the bird populations on islands close to Japan, such as the Ryukyus, Pescadores, Daitu, northern Bonins, and the southern Izus. Reputedly five million birds were caught on these atolls and islands in the 1890s (Yomaro Yamashima, biologist quoted in Harrison 1990:109).

Setup of Japanese Birding Operations

From accounts of the birding operations on individual atolls we can develop a picture of the ideal setup aimed at by the Japanese trading houses. Common to all poaching localities is that they had been traditionally uninhabited because of a relative lack of accessibility, water, and resources required to sustain a human population on a prolonged basis. Japanese plumage hunting and processing stations had to import all necessities, so such expeditions could not be mounted ad hoc if they were to succeed.

Although certain islands were visited on separate occasions in consecutive years, others seem to have been visited by several vessels at intervals of about

once every two to four months during the breeding season. The vessels would land new work crews of between ten and forty men, relieve the tired crew, and retrieve the procured feathers and skins.

Bases

The bases consisted of at least a tent camp, such as on the small islets of French Frigate Shoals and Pearl and Hermes Reef. Larger islands, with greater bird populations suitable for exploitation, saw bases with an array of houses, commonly of wood or iron frame with wooden walls (as was the case on Bokak, Laysan, Lisianski, Eneen-Kio, and Johnston) and occasionally supplemented by thatched dwellings (as on Bokak). On Eneen-Kio the living quarters even had glass windowpanes.

On Bokak, for example, the settlement consisted of a living house, a cook house used also as sleeping quarters, a food storage building, a work shed and a storage shed, plus a few thatched dwellings. The larger buildings could be quite substantial, measuring thirty feet by twelve (Lisianski) or even thirty feet by eighteen (Eneen-Kio). The food storage house on Eneen-Kio had been erected on six-foot posts and guarded with tin against rats and land crabs.

Water supply was a major problem. On most bases there was evidence of large water tanks (Bokak, Eneen-Kio) and of water containers in the form of pottery sake jars (Eneen-Kio) or tins (Lisianski, Eneen-Kio). On Eneen-Kio the Japanese had left behind a still. It is possible that stills formed standard equipment on most bases and went unnoticed by the few law enforcement visitors.

Localized fishing and interisland transport were made possible by the presence of small whaleboats and sampans, occasionally with sails, such as were encountered on Eneen-Kio, Lisianski (3), and Bokak.

On Eneen-Kio, where three settlements are known to have existed, a Shinto shrine was observed by members of the Tanager Expedition. It is possible that similar places of worship existed on other atolls but were overlooked by observers because of their unassuming nature.

The fact that the camps in several instances had been abandoned, rather than dismantled and removed, and the fact that boats as well as tools and equipment had been cached (for example, on French Frigate Shoals and Pearl and Hermes Reef) could indicate that the settlements had been abandoned only temporarily, presumably with the aim of returning once the bird populations had recovered.

On Eneen-Kio and Bokak Atoll, the Japanese had stored their supplies and procured feathers in two locations, presumably to be better prepared for eventualities such as storm damage or law enforcement missions.

Procurement Methods

The feather collectors had easy prey with the nesting seabirds, since these birds knew no fear of people according to a number of accounts (Bryan 1903; Drummond-Hay 1939; Irmer 1895; Senfft 1905; Begas 1909). The birds could be grabbed easily and their necks broken, or struck with a stick (documented for Laysan and Marcus). The breast feathers, top choice for the trade, were pulled out and the wings cut off. The carcass of the body, it is said, was dropped where the bird had been caught. In addition, birds were caught and their wings cut off while still alive. Thus mutilated, the birds were left to run and die from blood loss or starvation as they could no longer feed themselves. Those birds that survived the wing (hand) amputation—and those whose wings were merely broken—and were left to starve lost most of their body fat and thus were easier to pluck when killed than well-fed birds. In the end, it was that kind of cruelty to animals that caught the attention of the public and began to bring about change—at least in the Hawaiian Islands.

The trader Frank mentions that one method employed was to drive "the birds, which are very tame and fat, into caves and starv[e] them until they are emaciated, when the feathers are easily removed" (Coffee 1924:98). This would indicate that birding not only occurred on atolls, but also on raised coral limestone islands where such caves are common.

On Marcus the bird catchers would work mainly in the morning or during the evening hours, as this permitted the catching of the adult birds that were out fishing during the day. The equipment used consisted of a bamboo pole and a large basket. Bryan mentions for Marcus that a catcher could fill such a basket in about two hours, each basket containing about seventy-five individuals. On average a taxidermist would prepare fifty skins per day, though the "world record" stood at 130 skins for a single day, according to Bryan (1903).

Alexander Wetmore of the Tanager Expedition describes in his diary the setup of a work house on Eneen-Kio, based on the remains he encountered:

> Another shed, somewhat larger, was a workshop. In this were three or four low tables made of boxes, two by five feet on top, with a tray at either end 6 x 12 inches, one for plaster paris, the other perhaps for arsenic or some other preservative. A short string with a long hook tied at one end was fastened to a nail at the back and probably served to hold the bird's body during skinning. An apron at the front covered the lap of the labourer. There were large numbers of trays 18 inches by four feet to dry birds and a rack of

> bamboo at one side to support them. Barrels and boxes of plaster paris were found and a bale of oakum. In one box were several hundred small sticks with brown oakum wood wound about them, suitable for necks of birds. (Wetmore diary, 30 July 1923, in Olson 1996:106–107)

Choice downs of albatross chicks, it seems, were collected by dipping the dead chicks in boiling water and pulling out the feathers (Amerson, Clapp, and Wirtz 1974:27). The gathered adult feathers and wings were placed on the ground and covered with weighted-down mats to prevent them from being blown away during curing. In 1910 Jacobs encountered 200 such mats in operation on Laysan (Anonymous 1910c). Finally the feathers would be bagged in bales and readied for shipment. Birds wings would be cut off, deboned, and spread out on the sand with a small amount of salt sprinkled on them. If the weather was favorable the wings would be cured in between four and five days. During packing in bags or bales each layer of wings would be sprinkled with naphthalene (or oakum) to stave off infestation with beetles. In case of inclement weather the feathers would be covered with mats weighed down by "stones" (presumably chunks of coral; see Anonymous 1910h regarding Lisianski). The wings were usually cured and shipped whole, to be processed in Japan or another port. A small number of birds would be cured with arsenic, stuffed and shipped whole, possibly for trade to museums and collections as well as displays for feather merchants. The use of whole birds was rare, however, and was commonly limited to birds of paradise (Swadling 1996; Doughty 1975).

The trade was sufficiently lucrative, with an average collecting trip grossing close to US$100,000. According to statements by Japanese arrested on Bokak, the minimum price fetched at Yokohama for a pair of wings from frigate or tropic birds was 0.50 imperial German marks and for a full bird skin between 0.75 and 1.5 imperial German marks (Begas 1909). Prices quoted for the Laysan specimens were US$0.33 per wing and US$6.00 per pound of feathers (Ely and Clapp 1973:41). However, as the German government found out when it wished to sell the confiscated wings and feathers, the Japanese had been more interested in quantity than quality and many of the collected feathers had been so imperfectly cured that their retail value was very low (NLA 1909). A similar observation had been made by William Bryan on Marcus Island (1903:98).

In addition to the "normal" birding and the catching of fish and presumably turtles for consumption by the crew, other resources were also exploited by the crews if they offered themselves. By-catches included coral and sponges on Bokak (Stuckhardt 1909b), albatross eggs on Laysan (Harrison

Table 1. **Duration of a Tour of Duty on a Feather-Collecting Expedition**

Island	Dates	Duration	Source
Bokak	Sep 1908–Feb 1909	5 months	Spennemann 1998a
Bokak	Feb 1909–Jul 1909	5 months	Spennemann 1998a
Laysan/Lisianski	Apr 1909–Aug 1909	5 months	Jacobs 1910
Laysan/Lisianski	Aug 1909–Dec 1909	5 months	Jacobs 1910
Laysan/Lisianski	Dec 1909–Jul 1910	7 months	Anonymous 1910g

1990:37), albatross and booby carcasses boiled down for fertilizer on Marcus (Bryan 1903), and shark fins on Eneen-Kio (Leff 1940:23).

The Crews

The average tour of duty for a feather collector seems to have been six months, with about a five-month stay on a given island and approximately two weeks travel time each way. Table 1 compiles the few known "tours of duty" for feather-collecting crews.

The Japanese crews working on the islands were of different sizes, ranging from six in the case of Midway in 1901 to thirty-nine on Lisianski in 1904 (Table 2). If we look at the overall data, however, a pattern emerges (Figure 2). It would appear that the initial trips were made by small crews, that from late 1902 to 1904 quite large crews were employed, and that from 1908 onwards crews of nine to a dozen and a half people were deemed sufficient.

Table 2. **Size of Japanese Feather-Collecting Crews**

Island	Commencement	Crew	Source
Midway	1901	6	Hill 1901
Eneen-Kio	Jun 1902	≥ 8	Croskey 1902
Marcus	Late 1902	30	Bryan 1903
Lisianski	Jan 1904	38	*Pacific Comm. Advert.*, 11 Apr 1904
Lisianski	Feb 1904	39	*Pacific Comm. Advert.*, 11 Apr 1904
Bokak	Mar 1908	17	Spennemann 1998a
Bokak	Aug 1908	14	Spennemann 1998a
Lisianski	Apr 1909	9	Jacobs 1910
Laysan	Apr 1909	14	Jacobs 1910
Lisianski	Aug 1909	9	Jacobs 1910
Laysan	Aug 1909	15	Jacobs 1910
Christmas	Jan 1911	13	Bailey 1977

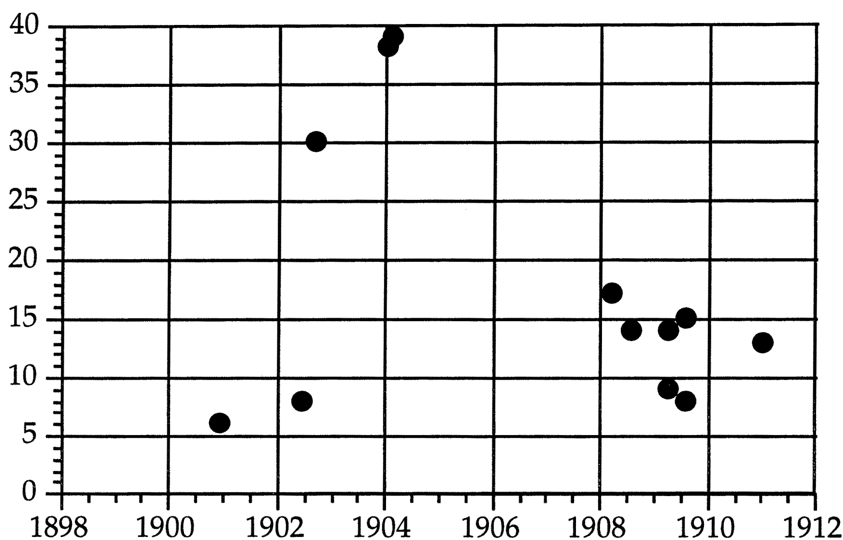

FIGURE 2. **Size of Japanese bird-catching crews over time.** (Sources: see Table 2)

We know from the examples of Bokak and Laysan that not all crew members were replaced. On Bokak Atoll the relief ship arriving in August 1908 placed only fourteen new crew on the island, with three of the previous crew continuing. On Laysan six of the April 1909 crew continued for another term.

Who made up the crews? Clearly the bulk of the crews were Japanese. The German administrator Stuckhardt mentions that one of the eleven Japanese arrested on Bokak was very old and one was "almost insane" (1909b), which would suggest that the bird-hunter crew was a mixed batch of opportunistic Japanese civilians rather than a highly trained group of insurgents. There is some evidence, at least from Eneen-Kio, that non-Japanese were also involved in the trade. The Tanager Expedition found remains of a Sydney newspaper, a European chair, two briarwood pipes, as well as traces of Latin letters on the stern of a whaleboat (Bryan 1959:4).

Considering the level of preparation required to run a birding operation on a small island, it is not surprising that some deaths appear to have occurred. We know, for example, that at least three people died and were cremated on Bokak in 1908/1909 (Stuckhardt 1909b), that some died on Asongsong in the Marianas (Spennemann 1999), that graves were seen on Eneen-Kio in 1906 (Dewey 1906) and that a Japanese grave had been found on Pearl and Hermes Reef (Wetmore diary, 28 April 1923, in Olson 1996:46).

TABLE 3. **Some of the Japanese Vessels Known to Have Been Involved in the Pacific Feather Trade**

Ship	Island	Source
Hokio Maru	Bokak Atoll	Spennemann 1998a
Daisho Maru	Marianas (proposed)	Spennemann 1999
Murashi Maru	Marshalls (?)	Spennemann 1998a
Niigata Maru	NW Hawai'i	See note 2
Niten Maru	Marianas (proposed)	Spennemann 1999
Sumiyone Maru	NW Hawai'i	See note 2
Tempou Maru	Laysan/Lisianski	Jacobs 1910; Munter 1915
Tiyo Maru	Lisianski	Jacobs 1910
Toba Maru	Christmas	Bailey 1977
Toru Maru II	Marianas (licensed)	Spennemann 1999
Yeiju Maru	Lisianski	*Pacific Comm. Advert.,* 16 Apr 1904

Who were the traders? For Bokak we know that a certain Komitaki Hitigiro (Kawashima Company) owned the vessel that dropped the catchers, while the Yamaguchi Marine Bureau of Shinegawa was involved in the Laysan exploitation. From the available historic data, however, it would appear that the vessels (Table 3) were chartered by the traders and that different syndicates were involved, as there is no indication that the same ships were regularly involved in the feather trade.

Geographic Scope and Chronology

As discussed so far, Japanese birding ranged from the Bonin Islands to Bokak, from Pratas to Christmas. The distribution of exploited islands is somewhat contiguous with the notable exception of Christmas, which is far off the main area. This could well indicate that other islands were also exploited but that traces of these activities went unnoticed.

Figure 3 shows the relative frequency with which an island was exploited (as a percentage of all documented events; see Figure 4 for details). The Hawaiian islands of Lisianski and Laysan seem to have been targeted by feather collectors more often than other islands, but this could well be simply an artifact of better detection by more-frequent law enforcement expeditions.

Based on the previous discussion we can compile a table showing the presence and absence of Japanese feather collectors on the various atolls between 1898 and 1916 (Figure 4). It is clear that the Japanese operations gradually moved ever further into the Pacific, first exploiting those atolls closer to Japan, such as Marcus.

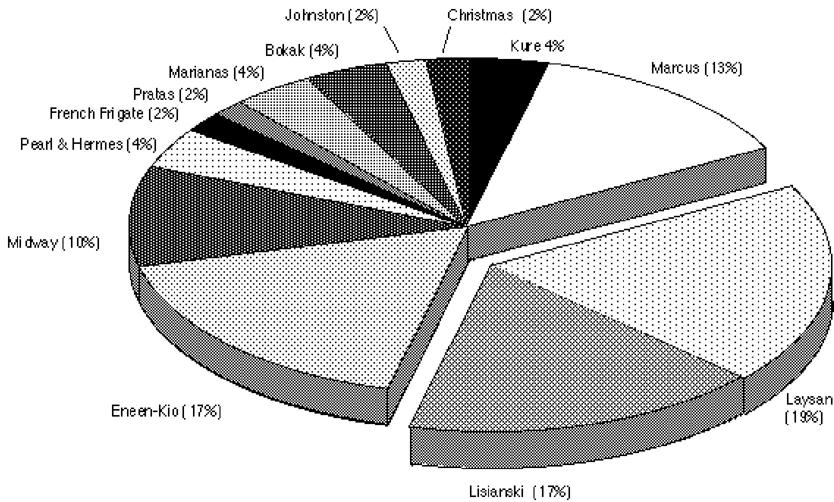

FIGURE 3. **Relative frequency with which an island was exploited as a percentage of all documented events.**

Figure 5 provides a histogram showing the level of known predation throughout the region by number of islands exploited during each calendar year. The major collection seasons were 1901 to 1904 and 1908 to 1910, with very little predation between 1905 and 1907. What is at first surprising is the gap in birding in the years 1912, 1913, and 1914. Since activities resumed in 1914/1915, we can assume that the trade had not completely stopped but had shifted to islands where it went on undetected. The 1911 apprehension of poachers on Christmas Island may provide some indication. As the atolls nearest to Japan were stripped of their bird populations or became increasingly policed, such as the Northwestern Hawaiian Islands, there was a need for other, more far flung locations to be found. On the face of current data it would appear that the Japanese did not exploit the resources on Bikar Atoll (Marshall Islands, 12°15′ N, 170°06′ E). However, in October 1914 the Japa-nese took over the German colonies north of the equator and began to exclude visitors from the area. It is quite possible that the Japanese government condoned birding on the northern atolls of the Marshalls as it had on Marcus.

We should also not forget that there are other suitable "source atolls," such as Palmyra (5°49′ N, 162°11′ W), Washington (4°41′ N, 160°15′ W), Fanning (3°51′ N, 159°22′ W), and Baker (0°13′ N, 176°29′ W). Poaching has not been reported for any of these atolls and islands, which is somewhat

Year	Kure Atoll	Midway Islands	Pearl and Hermes Reef	Lisianski Island	Laysan Island	French Frigate Shoals	Marcus Island	Eneen-Kio (Wake Island)	Bokak Atoll	Pratas Island	Mariana Islands	Johnston Atoll	Christmas Island
1881													
1882	?	?	?	?	?	?							
1883													
1884													
1885													
1886													
1887	□	□	□	□	□	□							
1888													
1889		?											
1890		?											
1891	?	?	■	?	■	?							
1892													
1893													
1894													
1895													
1896													
1897							?						
1898	■?						□						
1899				□	■		□						
1900		□					□						
1901		■		?	■		□						
1902					■		■	■					
1903		■		■	?		□	□					
1904				■	?		■	■					
1905								□					
1906								■					
1907								□	?				
1908	□			■	■			■	■	■			
1909				■	■				■		●		
1910		■		■	■						●		
1911											?		■
1912													
1913													
1914			□	□	□			□				?	
1915			□	■	■			?					
1916													

Permitted exploitation–●; Illegal exploitation event confirmed– ■ ; Illegal event inferred– □

FIGURE 4. **Japanese feather collectors: a chronology of known Japanese feather-collecting activities in the Central Pacific from 1881 to 1916.** (Sources: see text)

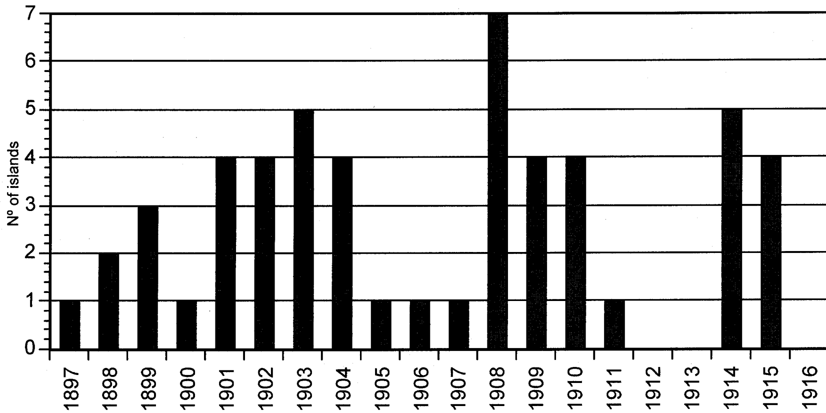

FIGURE 5. **Histogram showing geographic extent of exploitation of seabird populations by Japanese plumage collectors over time.**

surprising in view of the Christmas Island event, especially as all of the atolls mentioned are either en route to Christmas or near already-exploited islands. In the end, as has been noted earlier, on many islands the discovery of poachers was a lucky circumstance (or unlucky, depending on the point of view). Even where the poachers were caught *in flagrante* and where arrests were made, follow-up and ongoing legal enforcement was limited.

Enforcement by the Colonial Powers

How did the affected nations deal with the incursions of Japanese feather collectors? We have information on four countries (Germany, Japan, the United Kingdom, and the United States). Five different legal systems are represented, as U.S. legislation applied to the Hawaiian Islands differed from that governing the outskirts of empire, such as Eneen-Kio.

Japan

Clearly, the Japanese government treated feather and plumage collection as a valid private enterprise and condoned the activities, especially on the Volcano Islands and on Marcus, where it shared a national presence. On Marcus Japan worried more about possible U.S. claims to sovereignty than about the impact of feather collectors. Indeed, when the Japanese government learned that the Bernice P. Bishop Museum was sending a scientific team to Marcus, a Japanese cruiser was dispatched to "show the flag" to rein-

force sovereignty claims, as Japan feared that the U.S. might claim Marcus as part of the U.S.-Spanish settlement (Bryan 1903).

The German Approaches

The German government had mixed attitudes toward bird hunting. The colonial administration, far from Berlin in both space and mail time, had considerable latitude in the development of policies and rules (Hiery 1995a, 1995b). The "bird islands" were seen as a resource to be exploited, and this was advocated by the German administrator, Dr. Georg Irmer, in 1895 when the German Jaluit Gesellschaft was encouraged to exploit the large bird populations on Bokak Atoll (Irmer 1895).

Likewise, in New Guinea the German government condoned and taxed plumage collection but issued a series of regulations designed to license the trade.[4] While laws regulated the extent of the activities and even imposed temporary bans as well as conservation zones, they did not effectively regulate the number of birds taken and thus did not curb excessive predation.

The German Marianen Gesellschaft/Pagan Gesellschaft, which had leased the northernmost of the Mariana Islands, in 1909 was interested among other things in the exploitation of birds and employed Japanese bird catchers (Kirn 1910). The company's copra plantations had taken a battering in the typhoons of 1904, 1905, and 1907, and the profits derived from the feather trade, although quite handsome (65,000 imperial German marks according to Junker 1912:251), were not large enough to make up for the loss in copra income. To put this profit into perspective, we should note that the financial return for the feathers and skins was equivalent to about two-thirds of the return from the annual copra production of the island of Saipan (500 tons). The Marianas lease was terminated on 5 June 1911 because one of the conditions—the planting of coconuts—had not been met. The company went into liquidation in 1911, claiming that the Japanese hunters had worked for the competition but had been paid by the Marianen Gesellschaft.[5]

In the above three examples the concessions were offered to German companies. When a Japanese company applied, matters turned out quite differently. In 1907 a Japanese corporation inquired about the possibility of exploiting the bird islands of the Marianas, but was refused a permit. This action needs to be seen in the context of German antipathy to the Japanese commerce then spreading in western Micronesia (NLA 1907).[6]

On Bokak the German government had to deal with an uninvited and unlicensed group of plumage collectors. The atoll, expropriated from the traditional Marshallese owners as uninhabited and hence *terra nullius,* was leased to the Jaluit Gesellschaft for commercial exploitation.

German Enforcement on Bokak

A group of Marshallese from Maloelap Atoll arrived on 27 March 1909 on Bokak Atoll, where they encountered a group of eleven Japanese engaged in the collection of birds and fish (Loani 1909; Flower 1909; Latere 1909). Even though the German district administrator, the *Kaiserliche Bezirkshauptmann* of Jaluit, Regierungsrat Wilhelm Stuckhardt, was reluctant to act, the Jaluit Gesellschaft forced his hand to safeguard its interests (see Spennemann 1998a). Having chartered a schooner Stuckhardt arrested the Japanese on Bokak in early May and confiscated all the goods found—almost seven weeks after the incursion had been first noticed. Although Stuckhardt was informed by the Japanese on the way back that more prepared feathers had been hidden at other locations on Bokak (Begas 1909), he did not turn back to collect them.

After the return to Jaluit Stuckhardt, affording the Japanese neither a defense counsel nor proper interpreter, issued a magisterial judgment confiscating all the goods collected as illegally obtained material in contravention of various colonial laws and regulations on land ownership, customs, and registration of foreigners. Although Stuckhardt allowed a two-week period to lodge an appeal, this was not enough time to even inform the Japanese trading house about the crew's predicament. For unspecified reasons Stuckhardt abstained from pressing charges against the Japanese as individuals. The men were deported on the earliest postal steamer to Hong Kong. The confiscated goods were shipped to the German consul in Hong Kong for action, where they were formally passed on to local German companies for onward sale. Stuckhardt estimated the total value of the confiscated material to be between 78,000 and 150,000 imperial German marks, but the final value realized was less than the expenses of the German government because of a collapse of the feather market and the poor quality of the badly cured feathers (for more detail, see Spennemann 1998a).

On 2 November 1909 the cruiser SMS *Condor* arrived in Jaluit to afford the district administrator the opportunity to inspect various atolls of the Marshalls and to once more show German naval might to the Marshallese chiefs. Stuckhardt had requested that the *Condor* go to Bokak to investigate whether the island had once more been occupied and to confiscate the remainder of the bird skins. At sea, soon after departure from Jaluit, Stuckhardt had to be taken into protective custody after he jumped overboard in an acute attack of persecution mania (Begas 1909). At Bokak Captain Begas found the Japanese buildings still standing, but they had been cleared of all property, food, and tools. No prepared plumage was found, but on one islet thousands of rotting bird carcasses were encountered. Begas commented

that extremely few live birds were to be seen: the Japanese "had made a good job of it." On the way back to Jaluit the *Condor* also stopped to investigate the possible presence of Japanese plumage collectors on Bikar Atoll, another "bird island," which was found to be uninhabited and unpredated (Begas 1909).

In the final analysis the German enforcement action was a hamfisted approach by the German district administrator, who, while apprehending and deporting the Japanese, confiscated only a fraction of the illegally accumulated goods and forwarded them in such a state that the retail value was greatly diminished. As a result, the enforcement action incurred a loss for the German government, which, moreover, did not press any formal intergovernmental complaint with Japan and, to avoid any fallout on bilateral relations, did not press charges against the plumage hunters or the employing trader. Indeed the publicity was downplayed where possible. Even the formal annual report for 1909 filed by Stuckhardt's successor, Georg Merz (1910), merely stated briefly that an expedition was mounted, in the course of which the Japanese were arrested and a large number of bird skins and feathers confiscated.

U.S. Enforcement in Hawai'i

The U.S. law enforcement agencies, mainly the coast guard (then the revenue service) but also the navy, repeatedly encountered Japanese feather collectors on the Northwestern Hawaiian Islands. The collection activities were unlawful inasmuch as the Japanese were illegal immigrants and did not pay any taxes, but the nature of the business itself was not. Moreover, another issue had to be considered: national sovereignty. While the U.S. Navy feared that the presence of Japanese could be construed as an act of constructive possession, the U.S. State Department argued that the occupation of an island by a small number of Japanese feather collectors—in the absence of any U.S. authority or occupation—did not constitute any basis for sovereignty claims: "The settlement of six Japanese on the Midway Islands cannot be regarded by this Government as affording any basis for a claim by the Japanese Government" (Hill 1901).

In the first few years of the twentieth century, feather collecting and plumage exploitation had been outlawed in the territorial United States (Doughty 1975). Responding to pressure by the ornithological unions, and as a direct result of the poaching of seabirds, the Northwestern Hawaiian Islands—with the notable exception of Midway Atoll, which was retained by the U.S. Navy—had been declared the "Hawaiian Island Reservation" for wildlife by an executive order signed by President Roosevelt on 3 February

1909 (Palmer 1913). This reservation was administered by the Department of Agriculture until 1940, when jurisdiction was transferred to the Department of the Interior (Amerson 1971:42).

The executive order now made the Japanese plumage-collection trips illegal. The first arrests under the new status were made on Laysan Atoll in April 1909. The group of Japanese plumage collectors was apparently unaware of the fact that a bird sanctuary had been declared two months earlier. The Japanese could show that Max Schlemmer, who had a lease to the island, had granted them the right to exploit the bird population. Although the plumes were confiscated (Anonymous 1910a), the courts then, quite correctly, ruled that the Japanese had been acting in good faith and directed that they be shipped home at U.S. government expense and that no further prosecution follow (Ely and Clapp 1973:41). The twenty-three arrested Japanese were sentenced to twenty-four hours in jail and also deported, as they were deemed to be mere instruments of organized trading houses (Anonymous 1910h). Schlemmer was acquitted on a technicality but later indicted on a charge of bringing aliens into the country (Anonymous 1910b, 1910d, 1910e).

U.S. Enforcement on Wake (Eneen-Kio)

The U.S. government reacted to the Japanese presence on Wake in a way similar to its early reaction in Hawai'i. In June 1902, when the U.S. Army transport *Buford* encountered eight Japanese who claimed to be fishing, the captain, Croskey, suspected they were really pearling but did not take any action (Croskey 1902). Based on this information, the chief of the Bureau of Equipment, to whom Croskey was answerable, requested the Secretary of the Navy to take action,[7] who in turn took up the matter of the removal of the Japanese with the Department of State.[8] At this point, however, the issue became complicated and its resolution differed from the situation in Hawai'i.

The State Department requested information on the details of Wake's original annexation by the United States and whether the island at that time had been inhabited by Japanese or had shown any evidence of previous Japanese habitation.[9] Concurrently, the news of the Japanese presence on Wake and the U.S. inquiries was apparently carried by some newspapers, which commented on the impending deportation of the Japanese by a naval vessel to be dispatched for that purpose.[10] This brought about a representation by the Japanese ambassador to the Secretary of State. In a diplomatic note the Japanese government indicated that it had "no claim whatever to make on the sovereignty of the island, but that if any subjects are found on

the island, the Imperial Government expect [*sic*] that they should be properly protected as long as they are engaged in peaceful occupations."[11] The Secretary of State considered the matter sufficiently resolved and ruled that no deportation should occur.[12] The Japanese government was so advised and the matter was closed.[13]

Because of Wake's remoteness, the United States was not keen to enforce U.S. legislation. The island was not part of the Hawaiian Island Reservation, so its bird resources were open to exploitation. The Navy Department henceforth would occasionally stop at Wake to observe any activity.[14] Yet, from the records in hand it would appear that until 1922, when the abandoned Peale settlement was seen by the crew of the USS *Beaver,* the U.S. Navy was not aware of the Japanese plumage collection actions of 1907 and 1908 evidenced by the bunkhouse inscription. This neglect somewhat makes a mockery of the U.S. claim of law enforcement in its possessions.

British Enforcement on Christmas Island

And the actions taken by the United Kingdom? The British naval commander simply arrested and removed the Japanese found on Christmas Island, presumably acting on the strength of judicial powers entrusted in Her Majesty's Navy commanders. Commander A. K. Jones does not seem to have taken any further action (Bailey 1977).

Common Denominators

The only systematic enforcement against bird poachers was by the U.S. government on the northern islands of Hawai'i after enactment of the bird sanctuary in 1909. Before that, as well as on the other atolls of the Central Pacific, enforcement was haphazard and, where conducted, executed on economic grounds only. Ecological concerns did not enter into consideration.

There appears to have been little intragovernmental cooperation on the matter. The German minister in Tokyo, for example, sent a message about the Japanese activities on Laysan and Lisianski to Berlin, where it was duly placed in the Hawaiian file. This report, however, was in reaction to Japanese newspaper accounts discussing the arrest and deportation of the poachers by the U.S. authorities (*Hochi,* 22 February 1910, quoted in NLA 1910). Similar reports were not forwarded from the German minister in Washington. Further, there is no evidence whatsoever that the German colonial authorities in the Marshall Islands or the rest of Micronesia were informed about such happenings. The U.S. government seemed to have been more organized when it relayed the message from its consul in Tokyo to Hawai'i.

The common thread among the legal enforcement actions is that offenders were removed and property confiscated; other punishment did not occur. The reason for this state of affairs can be found in the new geopolitical reality of the era. In the battle of Tsushima in 1905 the Japanese navy had decisively defeated the Russian fleet. With that event Japan had established itself as a regional naval power to be reckoned with. In a period of accelerated naval growth none of the three affected governments (German, British, and American) could afford to alienate the Japanese over what was merely a minor trade problem. The Pratas Affair of 1908–1909 was a reinforcing, negative example.

The German consul in Hong Kong, dealing with the aftermath of the 1908–1909 Bokak incident, stressed that the regional and international attention surrounding the arrest of Japanese plumage collectors on Chinese-owned Pratas Island in 1908 had strained Sino-Japanese relations. A repeat of the situation was something the German government was keen to avoid. Thus while the Bokak incident figured in the Japanese press, it could indeed be suppressed in the German press (NLA 1909).[15]

A "soft" approach was deemed necessary or desirable by all involved. In addition, birding per se was not seen as problematic. Indeed, countries such as Germany issued licenses to plumage collectors and thus directly benefited through fees and taxes.

Banning the Plumage Trade

From 1908 to 1915 John Buckland conducted a public-education campaign in the United Kingdom, the British colonies, and beyond against the wholesale slaughter of seabirds for the plumage trade. His lectures were well attended and well reported in the press: newspapers publicized the issues with headlines such as "Cost of Women's Whims: Hats Decked with the Relics of Butchery" (Anonymous 1910f; see also Anonymous 1910g, 1911). In addition, he published articles (for example, Buckland 1909) and submissions to parliamentary commissions of inquiry (Buckland 1908; House of Lords 1908).

Concurrent to Buckland's campaign, the Royal Australian Ornithological Union was very vocal in opposing the plumage trade (Mattingley 1907a; Dickinson 1951) and its publication of photos of a ravaged heron colony in New South Wales caused much public outcry (Mattingley 1907b).

Following an inquiry by the House of Lords into the importation of plumage in 1908, several drafts of a bill regulating sales appeared.[16] Recognizing that the exploitation of seabirds was a matter that could not be controlled by the actions of a single country, the British government in 1909

extended an invitation to major European countries to an international conference specifically to deal with the prohibition of the plumage trade. Support for this initiative, however, was not forthcoming (Downham 1911). The International Fur Seal Conference of 1911, therefore, resolved in its Protocol XI of July 3 to prohibit the plumage trade in the following species: albatross, white tern, sooty tern, and gull. The degree to which this protocol was effective is unclear. Australia had banned the sale of plumes from Papua in 1908 and followed suit with a ban from the Northern Territory in 1913. The Netherlands followed in 1916, banning export from Netherlands New Guinea and the East Indies (Dickinson 1951:218). British national legislation was still being debated in 1914. Appeals for an international conference to ban the plumage trade continued but by July 1914 a conference still had not been agreed to, as France, Holland, Denmark, and Greece indicated that they would not attend and Germany argued that the existing conventions on domesticated animals, especially the trade in chicken, could be used to that effect.[17] Other interests were not concerned about the trade itself but feared that the mass killing of birds would reduce guano production on the islands (Coffee 1924:98).

There can be little doubt that the continued enforcement in Hawai'i took a heavy economical toll on the feather collectors. But the risks were well worth the gain. The end of poaching was not caused by the increased enforcement, as Harrison infers (1990:37), but by the impact of World War I on the European economies. The continued cost of the war effort in 1915 and 1916 caused many Germans, for example, to trade in their gold marriage rings for iron ones so that the emperor (that is, the government) could use the donated gold to buy raw materials needed for armaments. The ostentatious display of wealth, expressed in the visible form of hats adorned with exotic feathers, became no longer socially acceptable. The hats went out of fashion.

In the 1920s the trade resumed, albeit on a smaller scale, and some import of feathers—now disguised as "horsehair" and "cowhair"—into the United Kingdom was carried on.[18]

NOTES

The idea for this article was derived from archival research conducted on the indigenous title status of Eneen-Kio (Wake Island) in 1992, when I was working as the Chief Archaeologist of the Republic of the Marshall Islands. The issue was taken up again in 1996. I am indebted to staff of the Australian Archives (Canberra), National Library of Australia (Canberra), Bernice P. Bishop Museum (Hawai'i), and U.S. National Archives (Washington, D.C.), and to Hugo Philipps of the Royal Australian Ornithological Union for assistance with the procurement of archival material and less readily accessible references. Dr. Pamela

Swadling (Papua New Guinea National Museum and Art Gallery) and three anonymous referees provided constructive commentary on an earlier draft, and their efforts are gratefully acknowledged.

1. There is a considerable body of evidence that the initial arrival of humans on Pacific islands created substantial environmental change, which brought about the demise of many local bird populations (see Steadman 1995). Extinction or local extirpation was common on those islands and atolls where human habitation and food production were carried out, but less frequent on islands that saw only occasional visits. For the northern Central Pacific area under discussion, local variations of flightless rails were the most common species made extinct. At least two extinctions not listed in Steadman are on the historical record of the Marshall Islands. Oral traditions mention the presence of a small bird, *annang,* that tasted "sweet" (Krämer and Nevermann 1938:295; Erdland 1914:183, 245), which is reported to have been hunted to extinction in the Marshalls by introduced cats, and a small rail or megapode (genus unclear from archival records) on Bokak Atoll, which was possibly exterminated by Japanese poachers in 1909 (Spennemann 1998b).

2. American Vice-Consul to Japan to Assistant Secretary of State of the United States, 3 April 1909. U.S. National Archives, RG 126.

3. W. V. E. Jacobs in *Army and Navy Register,* 19 February 1910, quoted in Anonymous 1910g.

4. Verordnung betreffend die Jagd auf Paradiesvögel in Kaiser Wilhelmsland, signed Schmiele, 27 December 1892. In NLA 1892–1913. The regulation had been repeatedly amended, the last time on 13 March 1907. See Swadling 1996:232 ff. for a discussion.

5. Internal file memo, Karl Kirn to head of Reichs-Kolonialamt, 28 October 1910. In Reichs-Kolonialamt, A-III, Akten betreffend die Marianen Gesellschaft, Gesellschaften 10f, No. 10, File 2474, Vol. 1, October 1910 to June 1914 (National Library of Australia, microfilm G8530).

6. In 1908 the German consul in Kobe, Japan, gave a Japanese company run by Tamekuchi Yamada from Hiroshima and Uishi Koiszumi from Tokyo permission to seek from the Saipan office a lease on some bird islands. If none was made available, the Japanese company had the authority to pursue openings in Yap or the Marshall Islands, both of which were reported to have potential (Thiel 1908). The local German administration in the Marianas and the Carolines thwarted the Japanese attempts.

7. Admiral Bradford, Chief of the Bureau of Equipment, to Secretary of the Navy, 8 August 1902, U.S. National Archives, RG 40, Box 431, File 9642–4.

8. Acting Secretary of the Navy to Secretary of State, 9 August 1902. The navy considered Wake to be U.S. property not open to colonization or foreign settlement. Acting Secretary of the Navy to Secretary of State, 20 August 1902, U.S. National Archives, RG 40, Box 431, File 9642–4.

9. Acting Secretary of State to Secretary of the Navy, 16 August 1902, ibid. This information was provided on 21 August 1902: Acting Secretary of the Navy to Secretary of State, ibid.

10. Acting Secretary of State to Secretary of the Navy, 18 August 1902, ibid.

11. Takahira, Japanese Minister to the United States, to Secretary of State, 18 August 1902, ibid.

12. Acting Secretary of State to Secretary of the Navy, 18 August 1902, ibid. *Idem,* 21 August 1902, ibid., File 9642–5. To this the Navy Department concurred, ibid.

13. Acting Secretary of State to Takahira, Japanese Minister to the United States, 26 August 1902, ibid.

14. Acting Secretary of the Navy to Secretary of State, 28 August 1902, ibid.

15. Also mentioned in Voretzsch, German Consul Hong Kong, to Stuckhardt, Amtsleiter Jaluit, 30 June 1909. In NLA 1892–1913. The *Deutsches Kolonialblatt* of 14 August 1909, for example, comments on the successful move of the Samoan chiefs from Jaluit on board SMS *Jaguar,* but makes no comment on the Bokak affair (nor does the *Deutsche Kolonialzeitung* 26 no. 3 [1909], 551). Likewise, neither the *Times* nor the Sydney *Morning Herald* carry a comment on the incident—evidence that the German government was successful in keeping it low key.

16. *A Bill to Prohibit the Sale or Exchange of the Plumage and Skins of Certain Wild Birds,* U.K. Parliament, Bill 81/1910, Bill 263/1910.

17. See file, "Plumage etc of Non-Edible Birds," Governour General's Office, File CP 78/22, Item 1913/349, Australian Archives (ACT Repository). See British legislation, *Importation of Plumage (Prohibition) Bill,* U.K. Parliament, Bill 301/1913, Bill 28/1914.

18. See correspondence by the "Plumage Bill Group" in File A2911/4, Australian Archives (Canberra).

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