

Exploitation of bird plumages in the German Mariana Islands

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Abstract—At the turn of the century there was a great demand from the European and American fashion industry for exotic feathers. The German colonial government in the Marianas issued a license to collect the plumage of various native birds on several central and northern islands of the Marianas. Even though strict conditions had been attached to the license, there was little supervision or enforcement of the restrictions. As a result the bird populations were hunted to the verge of extinction, with Tropicbirds (*Phaeton* sp.), Brown Boobies (*Sula leucogaster*), Frigatebirds (*Fregata* sp.) and White Terns (*Gygis alba*) the most sought after species.

Introduction

In a recent publication, Swadling (1996) reviewed the history of the plume trade between Southeast Asia and New Guinea, and demonstrated its considerable antiquity. However, the demand for feathers to adorn headgear in S.E. and Central Asia was soon surpassed by the newly developed demand of the European fashion industry. During the latter part of the 19th century European fashion, copied in the Americas and Australia, saw even more elaborate feather ornaments on women's hats (cf. Swadling 1996:84–87). At the turn of the 20th century, a great demand existed for feathers for fashion and millinery purposes mainly by the millinery industry of France. While exotic feathers and entire plumages, mainly of birds of paradise, were the prime species sought after, and were the most expensive items, the demand was so great that many other species were also harvested. As the feather fashion descended the socio-economic ladder, the market for such hats expanded manifold, and the demand for less expensive, yet exotic feathers increased (Doughty 1975). Particularly rapacious were Japanese trading houses which operated from 1891 to 1915 at French Frigate Shoals, Kure, Laysan, Lisianski, and Midway Atolls, as well as Pearl and Hermes Reef in the Hawaiian Chain; Marcus, Wake, Bokak and Johnston in the Central Pacific; Christmas I. in the SE Pacific; and the Pratas Islands near China (Spennemann 1998a, b). In most cases the local bird population was almost completely annihilated, with at least two million birds killed (Spennemann 1997).

In the Pacific atoll trade the following were the main species hunted: Laysan Albatross (*Diomedea immutabilis*), Black-footed Albatross (*Diomedea nigripes*),

frigatebirds (*Fregata minor*; *F. ariel*), Tropicbirds (*Phaeton* sp.), Sooty Terns (*Sterna fuscata*), Masked Boobies (*Sula dactylatra*) and almost all minor tern species (Spennemann 1998a). The plumage and feathers collected by Japanese crews in the Pacific were landed in Yokohama, classed and transhipped to major markets in Europe. The North-American (New York) as well as the Australian markets were influenced by Europe.

German Plumage Trade in the South Seas

Compared with the German colonies in Africa, the German colonial administration in the South Seas, because of sheer distance and mail time from the colonial office in Berlin, was given much latitude to develop its administrative policies and related regulations (Hiery 1995a; 1995b). These colonial officers, mainly drawn from the educated middle classes, condoned the plumage collecting as a commercial venture.

In German New Guinea, where the prized plumage of birds of paradise could be procured, the German government condoned plumage collection but issued a series of regulations which governed the hunting of birds, designed to license and thus tax the trade (Schmiele 1892, Hahl 1907). While the laws and their amendments regulated the extent of the activities and even imposed temporary bans, they did not effectively regulate the number of birds taken and thus did not curb excessive exploitation. There were repeated conflicts between the feather hunters and local communities, an issue that is beyond the scope of this paper. It is important to appreciate, however, that one of the stipulations imposed by the German administration in New Guinea after 1908 required plumage hunting licensees to invest the profits they made from the trade within the colony (Preuß 1912:133; Swadling 1996:232). But even before this regulation came into effect, the trade in birds of paradise plumes allowed plantation owners to acquire the necessary funds to invest in the development of their copra plantations (Swadling 1996: 248 ff).

While the German administration condoned the trade in New Guinea, it actively encouraged it in the Marshalls Islands. In late 1895 the District Administrator Dr. Georg Irmer conducted an inspection of Bokak Atoll to collect 'guano' samples for analysis and to reaffirm the German territorial claim to the island. He observed a vast number of seabirds on the islands, with 4–5 pairs breeding on each bush, mainly huge frigatebirds, tropicbirds, 'sea gulls' (terns) of various species and a species of ground dwelling bird, presumably a rail or crane (Spennemann 1998b). Since the birds were not at all afraid of people and could be picked up by hand without a problem, Irmer suggested that the Jaluit Gesellschaft might wish to exploit the bird skins (Irmer 1895).

The Jaluit Gesellschaft, however, was preoccupied with the establishment and development of copra plantations in the southern Marshall Islands (and later also in the Carolines), which was seen to be a far more profitable undertaking. Before the exploitation of phosphate on Nauru and Angaur (Palau) and the devel-

opment of agricultural experiment stations, copra was the mainstay of the German economy in the Marshalls and in much of Micronesia. Other products, such as pearl shell, shark fins and the like were only of marginal significance (German Government 1908). Yet plumage collection was a viable economic option, promising not only short-term but high profits.

German Plumage Trade in the Marianas

Bought from Spain in 1898, the Northern Marianas (Figure 1) were administered by a district officer, and later only a station chief, who was subordinate to the Imperial German Governor General resident in Rabaul, New Guinea. As a result, all administrative orders and regulations in the Marianas were identical to those issued for German New Guinea, or were substantively modelled on the New Guinea examples.

The islands of Alamagan, Pagan, and Anatahan were leased by the German government to the Pagan Gesellschaft. In December 1904 a typhoon hit Alamagan (Fritz 1906a, Kirn 1909). Another strong typhoon struck the islands of Alamagan, Pagan, and Anatahan on July 5 1905, reducing the copra production by 50% for at least two years (Fritz 1906b). The typhoon must have also affected the islands of Guguan and Sarigan. In 1905 the Pagan Gesellschaft also suffered the loss of its primary trading vessel, the 137.3 GRT schooner *Garapan* (Fritz 1905) Just when the islands were about to recover, another typhoon struck on 24 September 1907, again affecting the islands of Pagan and Alamagan (Fritz 1906b), causing requests for the reduction in lease payments to the German Government (Senfft 1907).

To offset these losses, F. Weller and Pedro Ada, for the Marianen Gesellschaft/Pagan Gesellschaft, Saipan, leased for three years, effective 31 July 1909, the bird islands of Agrihan, Asuncion, Guguan, Maug, Farallon de Medinilla, Farallon de Pajaros, and Sarigan. The lease to exploit the birds was granted by the German authorities under the condition that the bird populations on these islands were not to be reduced to such a level that their survival was imperilled. Further, the lease stipulated that the birds had to be protected during the breeding period and for at least six months of the year. The other lease condition entailed the planting of coconuts to establish plantations.

The Marianen Gesellschaft/Pagan Gesellschaft, which employed Japanese staff to work as bird catchers (Kirn 1910a), made the handsome profit of RMK 65,000 in 1909 (Junker 1912:251). This was still insufficient to make up for the losses in copra production incurred due to the 1907 typhoon. To put this profit into perspective, we should note that the financial return for the plumes and feathers was equivalent to about 2/3 of the return for the annual copra production of the island of Saipan alone (500t).

To investigate the status of the leased islands halfway through the lease contract, the German station chief Karl Kirn accompanied company executives on a product collection trip on the vessel *Toru Maru II* (Kirn 1910a). Six Japanese were supposed to be working on Asuncion. On 18 December 1910, a number of

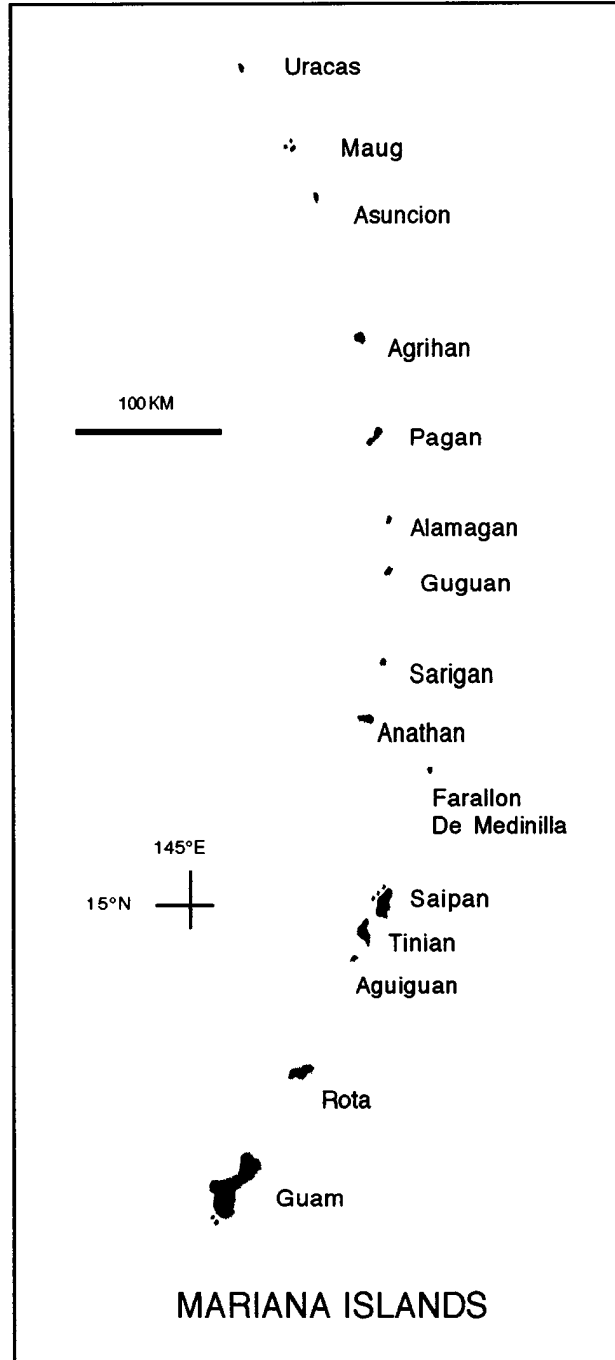


Figure 1. Map of the Marianas Islands showing locations mentioned in the text.

Table 1. Comparative bird records for Guguan. ■ - Sightings; □ - reported as present.

Common name	Species	Kirn 1910a	Reichel 1991
Shearwater	<i>Puffinus</i> sp.	■	
Tropicbird	<i>Phaeton</i> sp.	■	■
Brown Booby	<i>Sula leucogaster</i>	■	■
Frigatebirds	<i>Fregata</i> sp.	■	
Lesser Golden Plover	<i>Pluvialis dominica</i>	■	
Brown Noddy	<i>Anous stolidus</i>	■	■
White Tern	<i>Gygis alba</i>	■	■
White-throated Ground-dove	<i>Gallicolumba xanthonura</i>	■	
Micronesian Starling	<i>Aplonis opaca</i>	■	
Micronesian Honeyeater	<i>Myzomela rubrata</i>	■	
'boson' (Petrel or Frigatebird)		■	
owl species	<i>Asio ?flammeus</i>	□	

human corpses were observed by one of the landing party, which returned with the news to the ship. Due to bad weather the boat could not land again (Kirn 1910a). Neither the fate or identity of the dead nor the numbers of birds caught are mentioned in any of the German colonial files dealing with the bird islands and the trading companies involved.

On Guguan, where three Japanese bird catchers had been employed, Kirn had the opportunity to observe various birds (Table 1). The German and, on occasion, Chamorro bird names in Kirn's report were brought to the modern standard of Pratt et al. (1987) using Baker (1951) and Topping et al. (1980). Kirn observed the Micronesian Starling (*Aplonis opaca*), Brown Boobies (*Sula leucogaster*), which were very common on the branches of the trees, Shearwaters (*Puffinus* sp.), Tropicbirds (*Phaethon* sp.), frigatebirds (*Fregata* sp.), White Terns (*Gygis alba*), Brown Noddies (*Anous stolidus*), Golden Plovers (*Pluvialis dominica*), the White-throated Ground-dove (*Gallicolumba xanthonura*; the German source gives the Chamorro names for both male and female doves), the Micronesian Honeyeater (*Myzomela rubrata*), and an unspecified bird, locally called *boson*, most likely a species of petrel or frigatebird. An owl species (possibly *Asio flammeus*) was reported also to be present, but was not seen by Kirn (1910a).

The bird catch on Guguan for the five months preceding the visit accounted for only 1370 tropicbirds, 160 boobies and 200 frigatebirds. The birds had already been decimated on the island, had 'retreated to the hills' and became very hard to catch. Thus the three Japanese bird catchers were moved from the island (Kirn 1910a).

On Sarigan, there were eight Caroline islanders and six Japanese bird catchers who caught 323 *Sula*, 478 terns and 11 tropicbirds. In view of the 'meagre' results all but two bird catchers were removed.

The lease was terminated on 5 June 1911 as no coconuts had been planted by the company. It is noteworthy that the entire file correspondence on the matter focuses on the lack of coconut planting, and not the birds. Given the level of exploitation it is quite clear that the bird protection stipulations had been ignored.

As a result of the lease termination, 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 (Kirm 1910b).

Japanese Plumage Trade

The plumage collection license awarded to the German companies needs to be contrasted against the fact that similar licenses had been denied to Japanese companies only two years earlier.

In 1907 a Japanese corporation inquired into the possibility of exploiting the 'bird islands' of the Marianas, i.e., those islands where birdlife was plentiful and where seabird breeding grounds existed. The refusal of the German authorities to issue a permit was within the context of the German antipathy to Japanese commerce, which was spreading in western Micronesia (Consul Yokohama 1907). In 1908 the German consul in Kobe gave a Japanese company run by Tamekuchi Yamada from Hiroshima and Uishi Koizumi from Tokyo permission to seek from the Saipan office a lease of some on the 'bird islands'. If none would be made available, the company had the authority to pursue openings in Yap and/or the Marshall Islands, both of which were reported to have potential (Thiel 1908). But in the end, there no such openings were available.

Matters certainly were different the third time around. In August 1912 the Japanese businessman Shimizu, resident of Guam, wanted to lease the Northern Mariana Islands of Sarigan, Maug, Guguan and Asuncion for purposes of copra production and bird skin harvesting. The island of Guguan was reported to have allowed a harvest of 1,000 tropicbirds, while the island of Asuncion was deemed capable of providing 2,000 skins of that species. The German offer to lease all but the most productive copra island was rejected as at that time, and at that low level of bird abundance, plumage collection alone was not profitable enough to allow Shimizu to maintain a sizeable labour force (Rabaul Archives 1912).

In conclusion, the German government allowed in 1909 the exploitation of the bird resources by a German company resident in Saipan, after it had earlier rejected two proposals by Japanese companies. One of the stipulations attached to the lease contract, the planting of coconuts for the development of a copra industry, was not met by the lessees. When the lease was terminated in 1911, the bird populations had been reduced to such a degree that further exploitation was deemed uneconomic even in a period of expanding markets. While officially the conservation of the local avifauna was of importance to the German colonial authorities, and limitations on the level of exploitation had been included in the initial lease contract, that aspect was *de facto* the least important.

We can assume that bird protection regulations were deemed even less important after the German colony of the Marianas Islands was annexed by Japan in October 1914, which administered the Marianas as a Mandate of the League of Nations until 1944. Prior to World War I Japanese feather collectors had enjoyed free access to the Japanese islands of the Ryukuyus, Pescadores, Daitu,

northern Bonins and the southern Izus where reputedly 5 million birds had been caught (Yamashima, quoted after Harrison 1990, p 109) and to Japanese-annexed Marcus Island, where possibly over 1 million seabirds had been slaughtered (Bryan 1904). It is possible that the exploitation of seabird populations in the Marianas recommenced after the onset of the Japanese mandate.

Impact

Reichel (1991) compiled information on the current status of seabird populations in the Mariana Islands. If we compare the status for Guguan it becomes clear that a number of seabirds reported for the island no longer occur there (Tables 1, 2).

As outlined earlier, the German company leasing the islands had claimed that the bird catchers had sold feathers to the competition. Thus we have to assume that catch data in Table 2 are only a fraction of the real takings. In view of the catch figures available which for other Japanese seabirding operations in Micronesia and the Central Pacific can reach over 100,000 per season (Spennemann in press), the figures contained in the archival data most likely only represent the tip of the iceberg. Nonetheless, the catch figures reported by Kirn for the islands of Guguan and Sarigan are substantially higher than the breeding populations reported for the same islands in the late 1980s (Reichel 1991). Despite these catches, and despite the fact that the birds had become rare, the German government deemed the bird abundance in 1912 to be sufficient to permit the exploitation of a further 1,000 tropic birds on Guguan and 2,000 on Asuncion. Even though the license was never granted, that quota is well in excess of the current breeding populations of 120 (Guguan) and 10 (Asuncion) respectively.

It is always problematic to relate historic depletion data to the modern presence or absence of avifauna because other factors such as introduced predators and environmental modification cannot be ignored. What these figures illustrate, however, is the extent to which the avifauna was impacted during the German colonial period.

Table 2. Comparison of 1910 catch data (Kirn 1910a) and late 1980s breeding populations (individuals; Reichel 1991).

Common name	Species	Island	1910 catch	Breeding population
Tropicbird	<i>Phaeton</i> sp.	Guguan	1370	120
Tropicbird	<i>Phaeton</i> sp.	Sarigan	11	2
Brown Booby	<i>Sula leucogaster</i>	Guguan	160	220+
Brown Booby	<i>Sula leucogaster</i>	Sarigan	323	14
Frigatebirds	<i>Fregata</i> sp.	Guguan	200	??
White Tern	<i>Gygis alba</i>	Sarigan	478	30

Acknowledgements

I am indebted to Gary Wiles who commented constructively on an earlier version of the paper.

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