Hidden Stories of Extinction: Hawaiian ‘Ahu‘ula Feather Capes as Biocultural Artefacts

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Abstract

Natural history museums have been the natural place to find remnants of extinction, but extinction can also be hidden in cultural artefacts. This article identifies certain possibilities and challenges in telling extinction stories through cultural artefacts. Principally, they can reveal different anthropogenic connections to lost biodiversity and challenge our perceptions of extinction and how to restore relationships with what is lost. I illustrate this through the Hawaiian ahu ula (cloaks or capes) that were made from feathers of endemic forest birds now extinct or threatened on the islands. By approaching the ahu‘ula as a biocultural artefact, this article points to new ways of telling stories of extinction beyond natural history museums.

Key words: Ethnographic collections, biocultural artefacts, feather objects, extinction, Hawai’i.

The current massive loss of species has awakened an urgent need to bring new stories of extinction into the public sphere of museums. For Robert R. Janes (2009: 30), museums house an unused potential to respond to a ‘troubled world’ where the problems facing humanity are a result of our ‘failing relationship with nature’. Museums have been appointed as important agents to address ecological crises, such as climate changes and mass extinction (Newell *et al*. 2017), even if scholars have recognized various obstacles to fulfilling such a role (Cameron and Neilson 2015). One of the challenges addressed in this article is the division of ‘natural history’ and ‘human culture’ that followed the museums’ specialization into subject areas (Gordon-Walker 2019: 248). When extinction stories are limited to scientific contexts, it can, as Anna Guasco (2021: 1059) remarks, create an ‘incomplete understanding of the ways in which the ecological and the social are always, already entangled’.

Extinction scholars have mainly looked at natural history collections as remnants of extinction, from the display of ‘endlings’ (Jørgensen 2017a) to analysis of natural galleries of extinction (Guasco 2021) to critical exhibitions of extinction inside natural history museums (O’Key 2020). But as O’Key (2020: 644) rightly points out, ‘no matter how taxidermy specimens are reframed, they still stand as signs of anthropocentric mastery’. It imposes a challenge for museums to even talk about extinction through these very artefacts. Taxidermy is a particular western-oriented practice of preserving animal skins for science that developed in the sixteenth century. These specimens represent an often violent mastery over nature where humans intentionally killed animals to ‘save’ them from complete disappearance (Ashby and Machin 2021; Jørgensen 2021). Taxidermy has further been criticized for being ‘crushed beneath the weight of its own metonymic function’ (Bezan 2019: 214), as well as too narrowly focused on an individual animal that cannot represent an entire species’ intergenerational disappearance (van Dooren 2014: 11-12).

But natural history collections are not the only place where extinction features; cultural artefacts are also remnants of extinction. In this article, I argue for the importance of telling extinction stories through artefacts other than taxidermy capable of helping us see different (and alternative) anthropogenic connections to lost biodiversity. I exemplify this through the Hawaiian ahu ula (cloak or cape) often classified as an ethnographic or aesthetic object inside

museums. Historically, they were crafted for the ali'i (chiefs) of the Hawaiian Islands from the feathers of forest birds now extinct or threatened by extinction. This cultural practice is still maintained using other materials. As such, ahu ula bear witness to strong ties between Hawaiians and the natural world.

This article challenges dominant narratives of extinction in museums. By focusing on the correlation between the disappearance of cultural practices and the steady loss of biodiversity, it shows how stories of extinction can be told beyond natural history collections. Artefacts especially suited to highlighting this correlation belong to biocultural collections (Salick *et al*. 2014; Gilbert 2022). They are made from animal by-products including reptile and animal skins, ivory, coral, turtle and mollusc shells as well as feathers that have been used as decoration and in ornaments since the coexistence of humans and non-humans (Alves and Albuquerque 2017: 263). They are neither solely natural nor solely cultural even though they have often been classified as such. The Victoria and Albert Museum successfully explored these complex relationships in their *Fashion from Nature* exhibition (2018). The exhibit demonstrated how animals and animal by-products infuse cultural artefacts.

My approach aligns with Deborah Bird Rose, Thom Van Dooren and Matthew Chrulew's (2017: 2-6) call for a 'biocultural response' that recognizes the complexity of extinction that museums can engage. 'Biocultural diversity', coined by Luisa Maffi (2010), encapsulates the understanding that cultural diversity is interconnected with biodiversity. Fernando Vidal and Nélia Dias (2016) further argue through the concept of 'endangerment sensibility' that records of the endangered, and what has already been lost, play a significant role in how we value the soon-to-be-extinct. In an extensive study of the correlation between indigenous lands and conservation of biodiversity, O'Bryan *et al*. (2020: 6) concluded that 'Indigenous Peoples' lands are vital to any policies and programs aiming to further global biodiversity conservation'. Investigating extinction stories beyond natural history museums could bring new stories of lost biodiversity and human connections to the forefront inside museums.

In this article, I first describe the importance of feathers in Hawaiian culture by examining the connection between gods, birds, and humans and how this relationship was weakened with European contact. I move on to discuss how the 'ahu'ula that came to Europe with the Hawaiian royal couple's visit to England in 1824 became cultural artefacts. The third section describes the extinct birds as natural artefacts through examples of mounted birds collected from Hawai'i by European naturalists. Then, I visit the Bishop Museum in Honolulu to examine the indigenous understanding of the 'ahu'ula within its cultural and biological context. Finally, I ask whether considering the 'ahu'ula as a biocultural artefact might be instructing for bringing out extinction stories.

The Hawaiian Context: Gods, Birds and Feathers

The first human settlement of Hawai'i was by Polynesians between A.D. 940 and 1130 (Athens *et al*. 2014). They believed 'spirits alone peopled first the sea and then the land, which was born of the gods and thrust up out of the sea' (Beckwith 1970: 5). It is from these akua (deities) that all species originate. Man appeared last at the same time as the personal gods (Valeri 1985: 8). The Hawaiian ali'i are considered descendants of the gods. They belonged to the highest class and ruled over the subdivision of lands, as well as all living beings, who lived on those lands. Wars frequently arose among the ruling ali'i until the Hawaiian Islands (Hawai'i, Maui, Moloka'i, Lāna'i, Kaho'olawe, O'ahu, Kaua'i and Ni'ihau) were united under the Hawaiian Kingdom by Kamehameha the Great in 1810 (Malo 1903).

Birds were 'kindred and servants of gods'; some were even gods themselves manifest 'on earth in bird form' (Beckwith 1970: 92). Objects of the highest importance in ancient Hawai'i were therefore covered with feathers (Kaeppler 2010: 11): kahili (royal standards), ki'i hulu manu (god images), leis (garlands or wreaths), mahiole (helmets), and 'ahu'ula (cloaks or capes). The 'ahu'ula and mahiole were made specifically for the Hawaiian ali'i. 'Through the feather adornment, the *mana* [power] of gods was extended to the chief' (Marzan and 'Ohukani'ōhi'a Gon 2015: 31) to visualize their connection to the gods (Valeri 1985: 147).

At first, the capes were made in a rectangular shape with white, brown and black feathers from either seabirds or domestic fowls, but with time both the shape and the colour changed to the more notable circular red and yellow feathered ʻahuʻula. The red feathers of certain native forest birds attracted the Hawaiians' attention as red was considered the chiefly colour. This colour change gave rise to the term ʻahuʻula, which means ʻred garment' (Rangihīroa 1944: 9-10). Other colours, primarily yellow but occasionally also black and green, were introduced to create different geometric designs of triangles, circles and crescents that represented individual aliʻi.

The red feathers came mainly from ʻiʻiwi (*Vestiaria coccinea),* occasionally from ʻapapane (*Himatione sanguinea*); the yellow feathers from the ʻōʻō (*Moho*) and mamo (*Drepanis pacifica*) (Brigham 1899 [1974]). The ʻiʻiwi, mostly scarlet with black wings and tail and the ʻapapane, bright crimson with white undertail-coverts, are both endemic to all the main Hawaiian Islands. The four species of the ʻōʻō genus *Moho* were endemic to Oʻahu, Molokaʻi, Hawai'i and Kauaʻi. They were all black, with different patches of yellow feathers on the thighs, cheeks, under the wings or the undertail coverts. The mamo belonged to the same genus as the ʻiʻiwi but was black with yellow rumps and thighs. Their yellow feathers were more highly prized than the ʻōʻō 'because of their deeper golden colour and their greater rarity' (Rangihīroa 1944: 10). The fact that the ʻōʻō and the mamo birds supplied so few numbers of feathers per individual bird made the yellow feathers more valuable: 'Yellow displaced red as the colour of royalty' (Rangihīroa 1944: 10).

The birds were captured by kia manu (bird catchers) that would spend long periods out in the forest to learn the habitats of the birds (Emerson 1895: 102). 'The kia manu's knowledge of and experience with forest birds and their habitat was extraordinary' (Amante-Helweg and Conant 2009: 70). The methods for catching the birds varied in different districts, high- or lowland, on different islands and in different flowering seasons. One method used was a long pole with a fork at the end covered in a sticky gum that the bird would mistake for a branch. The bird catcher would collect the living birds in his bag. It was not permitted to kill the forest birds. 'The plumage-birds, like everything else in Hawai'i, were the property of the aliʻi of the land, and as such were protected by the *tabu*' (Emerson 1895: 110). However, this seems only to have applied to the ʻōʻō and mamo; these were released into nature again after the few yellow feathers were plucked. The ʻiʻiwi and ʻapapane were skinned and the birds often also served as a food source for the bird hunters (Gomes 2016). Kamehameha I remained critical towards the bird catchers' killing of the birds, stating 'feathers belong to me but the birds themselves belong to my heirs' (Emerson 1895: 111). The collected feathers were an offering to the gods with which land taxes were paid to the ruling aliʻi. One ʻahuʻula could consist of millions of feathers collected from thousands of birds.

The first European contact with Hawai'i occurred with the arrival of Captain James Cook in 1778. Soon afterward, more foreigners started arriving in the islands. Hawai'i's geographic position two thousand miles from the west coast of North America with no islands in between made it a strategic place to gather provisions and to overwinter (Kuykendall 1938: 1-28). Hawai'i formulated a defensive alliance with Great Britain but stayed independent (Gonschor 2019). The Hawaiian Kingdom was increasingly challenged by the appearance of Europeans and interests in the islands by foreign nations followed the influx of fur traders, missionaries, and whalers.

The Hawaiian feather tradition changed significantly during this time, both with the introduction of firearms that were now used to hunt the endemic forest birds for their prestigious feathers, also by the bird catchers themselves (Pérez 2021: 196), and Kamehameha II's abolition of the old religion (the kapu system) in favour of Christianity (Kaeppler 2010: 9). 'The value and utility of the forest birds and feather work were replaced by gems and other material possessions … and the spiritual significance of feather work faded with time', according to Verna L.U. Amante-Helweg and Sheila Conant (2009: 77), and so did the forest birds. The colonization of Hawai'i was not kind to many of its endemic birds. Hawaiian forest birds came under pressure from invasive species, avian diseases, deforestation, and over-hunting. Today, the birds that provided the precious yellow feathers are now all extinct: the O'ahu ʻōʻō in 1837, mamo (1898), Hawai'i ʻōʻō (1934), Moloka'i ʻōʻō (1981) and Kaua'i ʻōʻō (1987).

‘Ahu‘ula as a Cultural Artefact in European Museums

The ‘ahu‘ula started to serve a new function as diplomatic gifts in establishing global relationships (Kaeppler 2010: 28).[1] When Kamehameha II and Kamamalu visited England in 1824, they brought along with them several ‘ahu‘ula on their voyage to give to King George IV as part of their request for formal protection of the islands. In gratitude for safe passage, one of these ‘ahu‘ula was gifted to the shipowner, George Hill, whose ship had carried them to England. As would happen to many ‘ahu‘ula, it was traded several times among art brokers and museums. This one ended up in the collection of the ‘Rautenstrauch-Joest Museum – Cultures of the World’ in Cologne, Germany (Kaeppler 2010: 41). The ‘ahu‘ula was incorporated into their permanent exhibition ‘People in their Worlds’[2] when the museum reopened in 2010. The ‘ahu‘ula is displayed vertically with an angle of about 30 degrees on a curved cone next to a walrus tusk and a scale drawing of a Hawaiian ali‘i in the section ‘The Body as a Stage: Clothing and Adornment’. The precious feather material is recognized as a symbol of power that marked the leading chief’s high-ranking status in society (Engelhard and Schneider 2010: 162-3). But the story does not explain how the feathers connected the ali‘i with the gods that manifested themselves on earth as birds. Nor does it reveal how the birds, whose feathers were so valuable, no longer exist today.

The appearance of the royal Hawaiian couple in London in 1824 came as a surprise for many. ‘Neither the owners of the ship nor the British authorities had any warning about the strange cargo Starbuck [the ship captain] would discharge at Portsmouth wharf on May 17’ (Frankenstein 1963: 9). As it became known to the Foreign Office that the Hawaiian king and queen had arrived in England, the royal couple were assigned a guide, Frederick Byng, to accompany them around London. The royal couple also greeted him with an ‘ahu‘ula. This ‘ahu‘ula is today in the collection of the National Museum of Scotland. It was most recently on display in the gallery ‘Facing the Sea’ (2011-2019). In the cabinet, the ‘ahu‘ula is presented among artefacts from Easter Island, Fiji, New Zealand and Tonga. It is displayed along with the story of the Hawaiian royal couple under the headline ‘wrapped in feathers’. The story tells that ‘only people of the highest social rank could wear such cloaks’ and that the ‘ahu‘ula are ‘made from thousands of bundles of feathers attached to a fibre base’. These feathers ‘come from the tiny honeycreeper bird which is unique to the Hawaiian Islands’.[3] Although visitors get a hint of the birds whose feathers make up the object before them, they remain unidentified by names and their status in nature is unrecognized. The National Museum of Scotland has deliberately decided to separate their biological collections from the cultural ones (Guasco 2021: 1058), although their Pacific collections contain by-products from plants and animals that could diversify their stories about extinction in the ‘Survival Gallery’. The Museum has two ‘ahu‘ula in its collection, which it rotates regularly to prevent damage to the light-sensitive feathers (figure 1).[4]

As the royal couple were waiting to meet King George IV to discuss their desire to place the islands under the protection of Great Britain, they visited not only the theatre and the opera but also the Royal Military Asylum, an orphanage for children of military parents. It is assumed that the couple and their entourage contracted measles from this visit, ‘a fairly innocuous disease of childhood among Europeans, but a serious business for Pacific Islanders in whose homeland it was unknown’ (Frankenstein 1963: 14). The scheduled audience with George IV was cancelled and within a month both King Kamehameha II and Kamamalu died from the disease. The remaining entourage were invited to meet George IV at Windsor Castle. On this occasion, the king was presented with at least eight ‘ahu‘ula, six of which remain in the Royal Trust Collection that looks after the Royal Collection.[5] These six ‘ahu‘ula, two cloaks and four capes, were afterwards displayed in King George IV’s Armoury at Carlton House, a collection that filled the walls and ceilings of five rooms with over three thousand military weapons and uniforms from around the world (Peat 2019: 240). One of the ‘ahu‘ula has most recently been displayed in the exhibition ‘George IV: Art & Spectacle’ at the Queen’s Gallery (2020), an exhibition presenting George IV’s life through his renowned art collection.[6] Among swords, pistols, parade breastplate, and rifles, the ‘ahu‘ula is recognized for its function to protect the sacred bodies of the ruling Hawaiian ali‘i in a time of warfare, even though the protective status of the feathers is not mentioned in the exhibition.

Figure 1.

Another ʻahuʻula that can be associated with the visit of the royal couple to England is at the Field Museum in Chicago. It is unknown how the item came into the museum's collection, but it was also gifted to George IV by the entourage. The ʻahuʻula is registered in the division of birds in the zoology collection rather than in an anthropological collection. This is an example where the material of the ʻahuʻula has played a role in how the object has been categorized. The text accompanying the object reads: ʻiʻiwi feathers were a hot commodity for Hawaiian *aliʻi* (nobility). Thousands of them would be used to create *ʻahuʻula* (feathered capes) like this one from the Field Museum Collections. These items were rare and symbolized power and prestige.'[7]

As has become evident, the ʻahuʻula were gifted to rulers, shipowners, prominent people and others who accompanied the couple on their trip to and around England. The ʻahuʻula have shifted hands many times before they ended up within different museum collections, and even then, traded between different museums. They were traded for their significance and the rarity of the birds (König as quoted in Kaeppler 2010), whose feathers were used to

make the ‘ahu‘ula and protect the ali‘i, but rarely does the extinct status of the birds appear on exhibition labels. Since the feathers are what drive the narratives inside these museums, it would be possible, and perhaps necessary, to make more prominent the birds themselves.

Birds Brought Back to Europe

When the deceased bodies of the Hawaiian royal couple were transported back to Hawai’i in 1825 (Kaeppler 1978), Andrew Bloxam, a naturalist, joined them on this voyage. He acquired three living O‘ahu ‘ō‘ō from native Hawaiians and took them on the ship back to England. This was only a decade before the species was last sighted. The birds were rare to see and expensive to acquire. He explains in his diary:

> ‘They [the ‘ō‘ō birds] are now very scarce in all the islands. I did not see even one on the different excursions I made, & the natives asked a high price for the very few they brought to me & almost the whole of these were destitute of feathers. I preserved only one tolerable specimen the whole time I was upon the islands – & even from that some of the yellow feathers had been plucked out’ (Bloxam as quoted in Hume 2017: 286).

This specimen is one of eight specimens of the O‘ahu ‘ō‘ō to exist in the world.[8] It is now in the collection of the Natural History Museum at Tring in the UK.

Another mounted O‘ahu ‘ō‘ō is on display in the ‘Room of Endangered and Extinct Species’ at the Muséum National d’histoire Naturelle in Paris. The museum tells the extinction story of the ‘ō‘ō birds by including the Hawaiian feather work tradition. The display label reads: ‘Four species of moho once inhabited Hawai’i, each endemic to the large islands of the archipelago. The natives captured the mohos to decorate ceremonial clothes with their yellow feathers. Deforestation has also played an important role in these extinctions’ [‘Quatre espèces de moho habitaient autrefois Hawai’i, chacune endémique de l’une des grandes îles de l’archipel. Les indigènes capturaient les mohos pour orner de leurs plumes jaunes des vêtements de cérémonie. Mais la déforestation a également joué un rôle important dans ces extinctions…’] The Hawaiian feather work tradition is included in this extinction narrative but without any further details and description of what role birds played in Hawaiian cosmology or what the Hawaiian bird-catching tradition entailed. Nor does it describe how this tradition changed when the birds were not only caught but shot. Their extinction therefore must be seen in relation to European contact that brought both firearms, invasive species and avian diseases into the islands.

The museums could position themselves more critically towards the influence the arrival of Europeans had on the extinction of avifauna in Hawai’i. They could also contrast the mounting of tropical birds and their entry into their collection to the original Hawaiian bird-catching tradition. As Emerson points out,

> the days of the bird-catchers of ancient Hawai’i are over. Their place has been taken by those who know not Ku-huluhulumanu [the god of kia manu and feather workers] and the other gods of the craft. In their hands, instead of the snare and the pole, with its gum, its flowers and decoy, there is the deadly shot-gun (Emerson 1895: 111).

With the disappearance of the bird-catching tradition an intimate relationship and knowledge about the birds and their habitats simultaneously disappeared.

The Bishop Museum: Continuation Despite Extinction

The previous two sections dealt with the acquisition and display of ‘ahu‘ula and ‘ō‘ō birds in Europe. In the next section, I turn to the Bishop Museum in Honolulu to understand how the ‘ahu‘ula and the birds related to them are displayed in Hawai’i today.

I alight the bus after I hear Bishop Museum announced. I walk a few blocks in the historic Kalihi district before I stand in front of the entrance. I learned from Noelle Kahanu’s ‘A Bishop Museum Love Story’ (2019a: 165) that ‘you have to want to find this place’ far from

the tourist radar of Waikīkī Beach in Honolulu. Yet the Bishop Museum has been on my radar for years and I am excited to finally step foot inside the museum. I pass through the entrance building out onto the Great Lawn. The Bishop Museum was established in 1889 at Kaiwi'ula (an ancient battleground). It was built in memory of the last descendant of the Kamehameha dynasty, Princess Bernice Pauahi Bishop, and houses the world's largest collection of Hawaiian feather work. The Hawaiian Hall and the Pacific Hall are still to be found inside the original building, but the museum has expanded and now also comprises the Richard T. Mamiya Science Adventure Center, Nā Ulu Kaiwi'ula Hawaiian Garden, and Castle Memorial Building. Today, it is Hawai'i*'s* State Museum of Natural and Cultural History.

The Hawaiian Hall was restored in close collaboration with the community in 2009. It was, according to Noelle Kahanu (2019a: 168), 'a long overdue project … ending practices such as speaking *about* Hawaiians rather than *with* them'. The mele oli welcoming the visitor into the Hawaiian Hall highlights this:

> …'Pulu pē iho i ka lā'au
>
> Lā'au kupu mālamalama
>
> Ka lamakū e ulu a'e nei
>
> I ka malu kukui kaiwi'ula' …
>
> … 'Nurtured are the people
>
> The carriers of culture
>
> Passion sparks the seed of life
>
> Sheltered by this House'…[9]

The Hawaiian Hall displays the history and culture of Hawai'i through different realms on three floors: on the first floor is *Kai Ākea* (the wide expanse of the sea)*,* on the second floor *Wao Kanaka* (a lowland region where people live) and on the third floor *Wao Lani* (a distant mountain region inhabited by the gods).[10] Even though the Hawaiian Hall has been divided into these three realms, it is primarily to show how they are related and connected. 'All are founded upon interconnection, upon the belief that all living things are related – from the gods, chiefs and people to the land and ocean; from the insects and birds to the sea creatures, plants and animals.'[11]

This interconnectivity is also apparent in the display of Hawaiian feather work on the ground floor. In a glass cabinet is an 'ahu'ula displayed next to a woodcarving replica of two Hawai'i 'ō'ō birds and pā'a (bundles) of 'ō'ō feathers under the headline 'Ano Lani, 'Ano Honua (a Heavenly Nature, an Earthly Nature)' (figure 2). The 'ō'ō bird is associated with the god Kū who sometimes manifested himself as the bird (Valeri 1985: 12). The ali'i are connected to the gods as their closest descendants on earth. The feathers of the 'ō'ō birds belonged to them. Kia Manu (bird catchers) would venture into Wao Lani (the distant mountain region inhabited by the gods) to capture the birds and present their feathers to the ruling ali'i as an offering to the gods. When weaved together into an 'ahu'ula the ali'i's godly connection became visible. In this display of a Hawaiian feather cape, a 'heavenly nature' is connected to an 'earthly nature'.

I move up to the third floor, where I encounter the 'ahu'ula associated with the ali'i from the Kamehameha dynasty. The 'ahu'ula embody the mana (authority and power) of the ali'i, which puts the visitor in close contact with the heavenly. Kamehameha I's 'ahu'ula, primarily made of feathers from the mamo bird, is labelled as '… made almost entirely out of the rare yellow feathers of the mamo bird, over 60,000 birds yielded six to eight feathers each to comprise the half million yellow feathers needed for this cloak …'.[12] This number immediately gives a sense of the magnitude of an 'ahu'ula, which represents not merely one

Figure 2.

or a few birds, but thousands of birds. The display label further describes from which birds the feathers originate: ''ahu'ula, feather cape, feathers of mamo (*Drepanis pacifica*) and 'i'iwi (*Vestiaria coccinea*), netting of olonā (*Touchardia latifolia*) fibre' along with a historic drawing of two mamo birds by F.W. Frohawk from 1891. By illustrating the birds and specifying their names, the display effectively draws attention to the once-living sources of the 'ahu'ula. It connects the feather material to the birds that previously inhabited the Hawaiian Islands.

As I work my way through the three floors in the Hawaiian Hall, I am surprised to find no mention of the endangerment and extinction of these culturally important birds. I ask Cultural Resource Specialist, Kamalu du Preez, and Cultural Advisor, Marques Marzan, about this when we meet the following day. They work at the Bishop Museum and are both Native Hawaiian cultural practitioners. Through our conversation, it becomes apparent that extinction was not a focal point for much of the interpretation because the exhibition focuses on what Native Hawaiian people had at the time that the Hawaiian Hall was refurbished in the 2000s, which was not an extinction crisis but an abundance in cultural biodiversity. Their focus is not so much on what is lost, but more on creating the conditions that ensure the survival of what remains and enabling the return of what has been lost. 'Native Hawaiians didn't lament the loss of extinction', Kamalu du Preez explains, because extinction was not possible 'when people lived in balance as part of the world'. Du Preez instead mentions the Hawaiian concept of ho'i, which means 'to return again' or 'come back'. Instead of focusing on what has been lost, it is more essential to pass on ancestral knowledge and make it relevant to people today. 'As long as there is memory of it, it is never lost', Marques Marzan continues. Even if the 'ahu'ula is made of different materials and no longer serves the same function in society, what is maintained is the knowledge of how to make it.

In addition, Marzan asks whether we can be sure that something is indeed extinct, 'just because we cannot see it doesn't mean that it doesn't exist',[13] a question that Dolly Jørgensen has also raised in her investigation of how the 'presence of an absence' over time becomes the 'absence of presence' (Jørgensen 2017b). That the birds are no longer visible doesn't necessarily mean that they are extinct. Audra Mitchell (2020: 914) has pointed out that extinction is often framed as 'unintended, indirect, or unwitting disruptions of "natural processes"' in Western scientific theories of extinction, which makes extinction something passive, without agency. It overlooks indigenous stories of how more-than-humans can refuse to participate 'in processes that harm them, their communities, and their continuities' (Mitchell 2020: 917). In those situations, they can withdraw but also return when the relationship is restored. Here extinction is not an absolute closure, because their spirits live on through stories about them even though their physical bodies are gone.

After visiting the Hawaiian Hall, I go on to visit the Science Adventure Center. Here extinction is very present. The display case on 'Forest Birds of *Hawai*'i*'* is divided into three clear distinct categories: present, past, and future (figure 3). In the 'past' category, there is a picture of the O'ahu 'ō'ō since the species has not been seen since 1837. The present birds are all bird specimens of introduced forest birds as there are now more non-native avian species in Hawaii than native species.[14] None of the extinct native forest birds are on display. According to Molly Hagemann, the vertebrate zoology collections manager at Bishop Museum, the specimens of extinct species are old and rare and cannot be on display for long periods of time.[15] Instead they display realistic woodcarvings of endangered bird species (also seen in the Hawaiian Hall). The ones on display here are carved by the Japanese artist Haruo Uchiyama. The woodcarving of the birds allows for more tangible encounters with both living and extinct forest birds that can serve as an educational tool for the museum to create awareness about bird conservation. The art of woodcarving draws back the forms of the missing birds but without their precious feathers. The only organic remains of the extinct forest birds on display are therefore Hawaiian feather work in the public areas, but many more examples of these remains are preserved in the storage areas of both the Ethnology and Vertebrate Zoology collections.

Figure 3.

Scientific knowledge and Hawaiian cosmological understandings of origins are in tension in the Science Adventure Center. Hawaiian cosmology is incorporated in the 'Upper and Lower Tunnel of Hawaiian Origins', a collaboration between zoologist Samuel M. ʻOhukaniʻōhiʻa Gon III; Kahikūkalā Hoe, Keliko Hoe and students of Hakipuʻu Learning Center; and Hinaleimoana Wong and students of Hālau Lōkahi, but it is otherwise not worked into the science exhibitions. One temporary exhibition that did do this was Lele O Nā Manu: Hawaiian Forest Birds, displayed at the Bishop Museum in 2016. Lele O Nā Manu displayed 'the diverse natural history of endemic Hawaiian forest birds' along with 'their preeminence in traditional Hawaiian culture'.16 The Bishop Museum has further created educational resources under the title 'Wings: Birds & Feathers of Hawai'i' as part of their online learning centre.17 They combine materials about Hawaiian feather work tradition as well as the science of the Hawaiian forest birds. The educational resources connect Hawaiian feather work with both the birds and their threatened status. The Bishop Museum has in the past also organized 'Living Culture Workshops' where visitors learned how to make feather kahili.18

To learn more about contemporary Hawaiian feather work today, I visited Mele Kahalepuna Chun, a third-generation cultural practitioner of Hawaiian feather work in her workshop Na Lima Mili Hulu Noʻeau. She learned feather work from her grandmother and now carries on the tradition by teaching it to anyone who would like to learn it (including people outside Hawai'i). She sees it as her kuleana (responsibility). The feather work employs traditional techniques, but the art form has been modified accordingly to a changing society. The feathers are no longer hand-plucked by bird catchers but ordered from the US mainland. They do not originate from Hawaiian native forest birds, but from geese whose feathers have been dyed to imitate the bright colours of the endemic forest birds. Watching her cut the fabric and feathers, make the patterns, and stitch the feathers onto it, it is evident that the Hawaiian feather work tradition remains very much alive.[19]

Displaying Extinction through Biocultural Artefacts

Hawaiians had a meaningful connection to the endemic forest birds, which obtained a spiritual significance in Hawaiian cosmology. They were caught by kia manu (bird catchers) who either plucked or killed them for their feathers as an offering to the gods. Some feathers were finely netted together into an ʻahuʻula (cloaks or capes) to visualize the ruling aliʻi's (chief) connection to the gods. These feathered objects are preserved in different museums today. One ʻahuʻula consists of millions of feathers from thousands of birds. They offer an insight into the interconnectivity Hawaiians felt with all living things. But the ʻahuʻula has also acquired a new meaning as its feather material is the only thing that remains of some Hawaiian forest bird species today. The ʻahuʻula is therefore an example of a biocultural artefact through which museums can engage with a present extinction crisis. This is important for two reasons: 1) To reveal different anthropocentric relationships to lost biodiversity than the one presented inside natural history museums; 2) To challenge our perception of extinction and how to restore relationships with what is lost.

Yet extinction is rarely mentioned in connection with the ʻahuʻula inside museums today. One reason is the tendency inside Western museums to distinguish between cultural and natural artefacts. In a European context, the ʻahuʻula is recognized for its cultural significance, and even though the rarity of the forest birds made them valuable trading objects, the display of them today does not connect the ʻahuʻula to the birds. Another reason could be that when extinction pertains to science, it can be challenging to blend extinction with cosmological understandings of origin. This might explain why extinction is not mentioned alongside the ʻahuʻula in the Hawaiian Hall, even though here the birds are both specified by names and represented in drawings and woodcarvings. This means that to learn about the present ecological situation of the Hawaiian forest birds, one needs to visit the Science Adventure Center at the Bishop Museum, or, in the case of Europe, a natural history museum where ʻōʻō birds are occasionally on display. What is problematic about this is that extinction is only presented from a scientific point of view. As both Kamalu du Preez and Marques Marzan explain, extinction means gone forever, but in Hawai'i, there is a belief that something lost can return. Telling extinction stories through biocultural artefacts is therefore not a question

of simply incorporating Western scientific understandings of extinction into the display, but of understanding how biodiversity and cultural diversity are intertwined.

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Endnotes

1 The act of 'freely gifting' will not be discussed in this article. See instead Kahanu 2019b.

2 Dr Oliver Lueb, Deputy Director and Curator of Oceania, Rautenstrauch-Joest Museum, personal communication, 17 November 2020.

3 Quote from the display label 'wrapped in feathers' in the Facing the Sea gallery at the National Museum of Scotland.

4 Dr Ali Clark, senior curator of Oceania and the Americas, National Museum of Scotland, personal communication, 16 November 2020.

5 Six in the Royal Trust Collection (RCIN 69990, 69991, 69992, 69993, 69994, 69995), one at the National Museum of Scotland (A.1948.274) and one at the Chicago Field Museum.

6 The exhibition *George IV: Art & Spectacle* can be viewed as a virtual exhibition. https://www.rct.uk/collection/themes/exhibitions/george-iv-art-spectacle/the-queens-gallery-buckingham-palace/view-the-exhibition, accessed 5 January 2021.

7 The Field Museum, ''Ahu'ula Feathered Cape from Hawaii'. https://birds.fieldmuseum.org/media-gallery/detail/376/1271, accessed 13 November 2020.

8 The Natural History Museum, 'VEL.26.19a'. https://data.nhm.ac.uk/dataset/56e711e6-c847-4f99-915a-6894bb5c5dea/resource/05ff2255-c38a-40c9-b657-4ccb55ab2feb/record/3931289, accessed 9 March 2021.

9 Quote from the mele oli 'welina (welcome)', composed in March 2009 by Bishop Museum staff members Marques Marzan, Aaron Ho, Rona Rodenhurst, and Kealoha Kelekolio. The two parts are not equivalent. My focus is on the intention put forward in the English version.

10 From the exhibition text 'Nā Wao no ka Poʻe Hawaiʻi (the realms of the Hawaiian people)' in the Hawaiian Hall at the Bishop Museum.

11 Quote from the display label 'I Ka Wā Mamua (In the Time Before)' in the Hawaiian Hall at the Bishop Museum.

12 Quote from the display label 'Mamo Cloak of Ke Ali'i Lani' in the Hawaiian Hall at the Bishop Museum.

[13] Kamalu du Preez, Cultural Resource Specialist, and Marques Marzan, Cultural Advisor, Bishop Museum, interview by author, 25 January 2022, Honolulu, Bishop Museum.

[14] From display label 'Extinction: Losing a Legacy' in the Science Adventure Center at the Bishop Museum.

[15] Molly Hagemann, Vertebrate Zoology Collections Manager, Bishop Museum, personal communication, 11 November 2020.

[16] The Journal of Bernice Pauahi Bishop Museum, '*Lele O Nā Manu: Hawaiian Forest Birds', 2016.* https://www.bishopmuseum.org/wp-content/uploads/2019/09/2016-1-SPRING-Ka-Elele.pdf*, accessed 7 February 2021.*

[17] The Bernice Pauahi Bishop Museum, 'Wings: Birds & Feathers of Hawai'i', 2016. https://www.bishopmuseum.org/online-learning-center/wings/#culture, accessed 10 November 2020.

[18] The Bernice Pauahi Bishop Museum, 'Living Culture Workshop: Kāhili Pa'a Lima (Hand-held Kāhili)', 2019. https://www.bishopmuseum.org/calendar/living-culture-workshop-kahili-pa%CA%BBa-lima-hand-held-kahili/, accessed 8 March 2021.

[19] Mele Kahalepuna Chun, third-generation cultural practitioner of Hawaiian feather work, interview by author, 2 February 2022, Honolulu, Na Lima Mili Hulu No'eau.

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