

Hihi – Stitchbird facts

As we approach Christmas and the New Year we also approach the first year anniversary of HANZ. Woo! To celebrate us lasting a year and not just my dad listening but actual real people too, I have decided to do what most podcasts do during this time and do an AMAA or Ask Me Almost Anything or a Q and A episode if you like. So, to do that, I need questions that you would like answered! They can be about pretty much anything you want, stuff about the podcast, how I make it, the research, what I wear while recording, I don't know! But you can also ask anything about me, who I am, my biases and just generally get to know me better if you want! There are a few restrictions though, as you might expect. I won't answer anything too personal or that might tell you more about where I live and work. All I will say on those fronts is that I live in Wellington and I work in conservation, so don't bother asking anything deeper. Don't worry too much about that though, I'll filter questions that I deem out of scope, so fire away anything you want to know through to me via Twitter, Facebook, Email and all the usual places! I'll probably need quite a few so really go nuts!

Kia ora, gday and welcome to the History of Aotearoa New Zealand. Episode 26: My Birb of the Year. I know I said that we would be talking about Māui this time but he will have to wait for next time cause I decided to do something a bit different. This week is New Zealand's Bird of the Year Award, where we vote for the bird to be crowned as the best one for a year! So to coincide with that I am going to tell you all about the bird I will be voting for as number one as this also coincides with the launch of the Patron only episodes! If you are a Patron of \$5 or more you will get access to a series of episodes that I will make all about Aotearoa's native and endemic species, whether they be birds, fish, bugs, lizards, not lizards or whatever else I can find. These will be released kinda as and when I can do them so they will be a bit infrequent but I am going to aim for a schedule, though I'm not going to tell you that schedule is just in case I don't meet it. I will also be doing a random Patron only episode on Kiwi slang if anyone is interested too, cause why not? These animal episodes come as a popular request after the tuatara episode as it turns out a lot of you found that pretty interesting, which is great! Just like that episode these will be mostly unscripted with support from my research notes, so there will be ums and ahs as well as maybe the odd swear and definitely talk about mating between animals, as it is pretty key to their survival and continued growth. So with that in mind, lets talk about my number one choice for Bird of the Year, drumroll please... the hihi or stitchbird!

NZTCS (New Zealand Threat Classification System): Nationally Vulnerable meaning they are threatened and are two steps away from extinct, so better than nationally endangered or nationally critical.

What do they look like: NZ birds online physical description: Medium sized songbird, 18cm in length, about 30-36g depending on if it's male or female, males bigger. Slender down curved blackish bill, bold white wing bars and habit of cocking its tail. Males have a black head with white ear tufts, yellow neck and shoulder band, white wing bands and greyish brown body. Females are greyish brown apart from white wing bars and juveniles resemble adult females. Female hihi look similar to female korimako (bellbirds), but korimako tend to be a bit greener rather than the grey brown of hihi. Female korimako also don't have the white wing patches of female hihi and are a bit slimmer and slower movement. The Māori name hihi comes from the same word that means ray of sun and were said to be carriers of the suns rays, spreading light through the canopy.

Calls: Males emit whistle calls with 2-3 notes, which females will sometimes make too. Both sexes will emit a titch warning call, single note high pitched whistles, a quiet warble, short identification or

aggressive warbles and a single note alarm call which is similar to korimako. Females emit a loud and fast alarm call when chased by males during breeding season. (insert calls here)

What do they eat: Nectar, fruits and insects. The fact that they eat nectar like tui and korimako led to the thought that they were related but more recent studies have shown they are the only representative of their family whose closest relative are wattlebirds like kokako, tieke (saddlebacks) and the huia, which is extinct.

Where do they live: Originally found all through North Island, including Great Barrier and Little Barrier islands (Little Barrier called Te Haururu-o-Toi), just outside the Hauraki Gulf near Auckland and Kapiti Island just off the west coast of the lower North Island. First sighted in 1835 in the Bay of Islands but they had disappeared from the mainland north of Waikato by the 1870s. Last mainland sighting was in 1883 in the Tararua Ranges, which is now a national park. After this hihi were only found on Little Barrier Island. This is due to the usual suspects, cats, rats, stoats, habitat loss and specifman collecting as well as the fact they seem to be especially prone to diseases from introduced birds. They are generally quite sensitive to the health of the forest so their disappearance is a good indicator of a declining environment. Hauturu was made a bird sanctuary in 1894 and a nature reserve after that which probably saved the hihi from extinction. Lots of attempts to translocate them were unsuccessful, such as to smaller islands near Little Barrier throughout the 80s and 90s, an attempt in 1994 to Mokoia Island in Lake Rotorua and an attempt in 2007/2008 to the Waitakere Ranges. However, they have now been translocated with much more success back to Kapiti island, Tiritiri Matangi Island in the Hauraki Gulf, Maungatautari near Hamilton, Bushy Park Sanctuary near Whanganui and Karori Sanctuary in Wellington, now called Zelandia.

What kind of habitat: They like mature native forest, so the kind of forest you picture when you think New Zealand native bush. They can be sustained with supplementary feed in a seral habitat, basically a more shrubby, scrubby, grassy kinda habitat with few large trees. Supplementary feeding is currently required at all sites though due to hih inability to sustain a stable population on its own at the moment due to not enough food and deadly fungal infections from *Aspergillus fumigatus*.

Population: Probably doesn't exceed 2000 individuals, although the Little Barrier Island was thought to have had 6000 individuals after cats were eradicated from the island in 1980.

Breeding: Hihi breed in spring and summer. Build a woven cup nestlined with tree ferns and feathers on top of a stick bas inside a natural tree cavity or next box if it has been provided. Up to four clutches of 1-5 (average of three) eggs laid per season. Clutch size decreased as bird gets older. Females incubate alone for 15 days but males help with rearing the chicks.

Behaviour: Have a complex social structure and mating system. Such as males and females have been visiting nests that aren't their own and chicks from various nests get together after fledging and perform behaviours that have been interpreted as play. Adult males will also form groups with juveniles during winter where hierarchies possibly occur. We don't really know much about this though! Hihi are polygynandrious which means both males and females have multiple partners during breeding season. This is really unusual in birds as only six other Passerines (the Order that hihi belong to) have been recorded as exhibiting this mating method. Due to the males needing to compete with each other to breed with females, they need to produce a lot of sperm. What's one way to produce lots of something? You increase the size of the factory. By that I of course mean hihi have huge balls, four times larger than would be expected of a bird of their size, additionally the part of the body where birds store sperm, called the cloacal protuberance is three times larger than expected during breeding season.

To add to their unusual mating habits, hihi are one of the only birds to mate face to face in what is essentially the missionary position, something no other bird has been observed doing. This presents an interesting problem as the 'machinery' of the cloacal proturbence are not designed in birds to mate in this position. So it will actually change angle so as to be able to successfully mate. The not so fun part of this is that these face to face matings are thought to be forced, by extra pair males (males who have already paired up). At Tiritiri Matangi, 32% of matings were face to face. The other position the use is the common male on the back of the female.

Research and Recovery: Current research includes developing a technique to measure the size of the Little Barrier population and assess its health and viability, in Tiritiri Matangi a study is looking at carotenoid availability on hihi health (caotenoids arew the molecules that give hihi feathers their yellow colour as well as the colour in the egg yolk). Obviously the long term goal is to increase the population, with a focus on ensuring the Little Barrier population is protected, establishing self sustaining populatiuons, monioring and enhancing more populations on managed islands, improving our knowledge of hihi through research and maintaining a small captive population.

BOTY Votes:

1 Hihi

2 Tarāpuka – Black billed gull

3 Tīeke – Saddleback

4 Ruru – Morepork

5 Hoiho – Yellow Eyed Penguin