

ATIU SWIFTLET, *KOPEKA*

(Aerodramus sawtelli)

SPECIES STATUS REPORT 2020



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Summary

The Atiu swiftlet (*Aerodramus sawtelli*), known locally as the *kopeka*, is endemic to the island of Atiu within the Cook Islands and is listed under the IUCN Red List as 'Vulnerable' (BirdLife International, 2016; IUCN 2020). Under the Ridge to Reef project (R2R), the Atiu Swiftlet was listed as a key terrestrial species for conservation activities (UNDP Project document, undated). Projects relevant to the *kopeka* that were initially planned to be implemented under R2R included: support for the *kopeka* conservation effort; support collaborative work amongst key stakeholders such as National Environment Service (NES), National Heritage Trust (NHT), the Atiu Island Council and Traditional Leaders to create and implement a Species Conservation Plan for this species; and to measure the population at the end of the project to gauge the overall results of the species conservation plan. The R2R baseline figures for the *kopeka* were recorded at 420 individuals in 2015. Species target goals upon completion of the R2R project were for 'no net decline in population numbers'.

During the four-year R2R programme 2015-19, later extended to 2021, no updated population surveys were conducted. In 2016 -2017, estimated population numbers were around 600 adults (M. Humphreys pers. comm, 2020), but questions remain over the methodology used and these figures have not been corroborated. Based on this, Gerald McCormack, Director of the Natural Heritage Trust, advised in 2020 that "no total counts for both caves have been [confirmed] above 420" but that the population was stable (pers. comm, 2020). This supports an assumption that the R2R project's target goals were achieved in that 'no net decline in population numbers' is likely to have occurred over the programme period.

Atiu Swiftlet species background

The Atiu Swiftlet is the only swiftlet species recorded in the Cook Islands. It is only found on Atiu, an upraised coral atoll with a land area of 2,693 ha (Tarburton 1990). Anecdotal information indicates that the *kopeka* may have once been also found on the neighbouring atoll of Mauke, as there is local reference to a cave named 'Ana Kopeka' or *kopeka* cave (G, McCormack pers. comm, 2020).

Currently, the *kopeka* nests in only two caves on Atiu. These are *Vai tupuranga* and *Anatakitaki*. These echolocating swiftlets have contributed towards an ecotourism industry on Atiu for over 20 years (M. Humphreys pers. comm, 2020). *Kopeka* tour guides over the years have included pioneer Carl Henry in the mid-1970s, George Mateariki from 1997 to 1999, followed by Marshall Humphreys up until 2018, and then Ben Isaia till present (M. Humphreys pers. comm, 2020).

Kopeka breeding season is from late August to September when nests are being built, and then continues through to April when the last chicks are fledged (Tarburton 1990). The nests, like those of most other swiftlets, are composed of vegetable matter and saliva (Tarburton 2017). Unlike other swiftlet species, the *kopeka* does not cluster its nests in close proximity within a dark section of the cave, but rather nests are spaced out to reduce predation by natural threats such as the coconut crabs (*Birgus latro*) and land crabs (*Discoplax longipes*) (Tarburton 2017).

The *kopeka* can lay up to two eggs per breeding season and is the only swiftlet known to be able to gather enough food to raise an experimentally added third nestling (Tarburton 2017). Common prey for the swiftlet are insects that are caught in flight (Tarburton 1990).

Population history and distribution

The *kopeka* are known to nest in two cave sites in Atiu; *Anatakitaki* on the eastern side and 'Vai tupuranga' on the south west side. *Anatakitaki* has been used for cave tours since the 1990s, as it is bigger and more accessible for tourists to see the *kopeka* nesting sites. Figure.1 shows the location of this cave within Atiu. *Vai tupuranga* on the other hand, due to landowners requests, is closed off to tours and only visited by landowners and for research purposes. The exact location of this cave is also a closely guarded secret, and it is not recorded on maps, to avoid disruption to the birds from any curious visitors (G. Mateariki, pers comm).

The *kopeka* has been observed foraging over the whole of Atiu, though they are less frequently observed in the areas of the wharf and the airstrip (Tarburton 1990). Recently, *kopeka* have been sighted more regularly on the south-east side of the coast (G. Mateariki pers comms 2020).

Earliest population records for the *kopeka* include observations from Holyoak (1980) who states the total population was apparently around several hundred birds in 1973. A colony of about sixty nests was visited in September 1973, where nests contained one or two eggs. Incubation was being carried out by both male and female birds (Holyoak 1980).

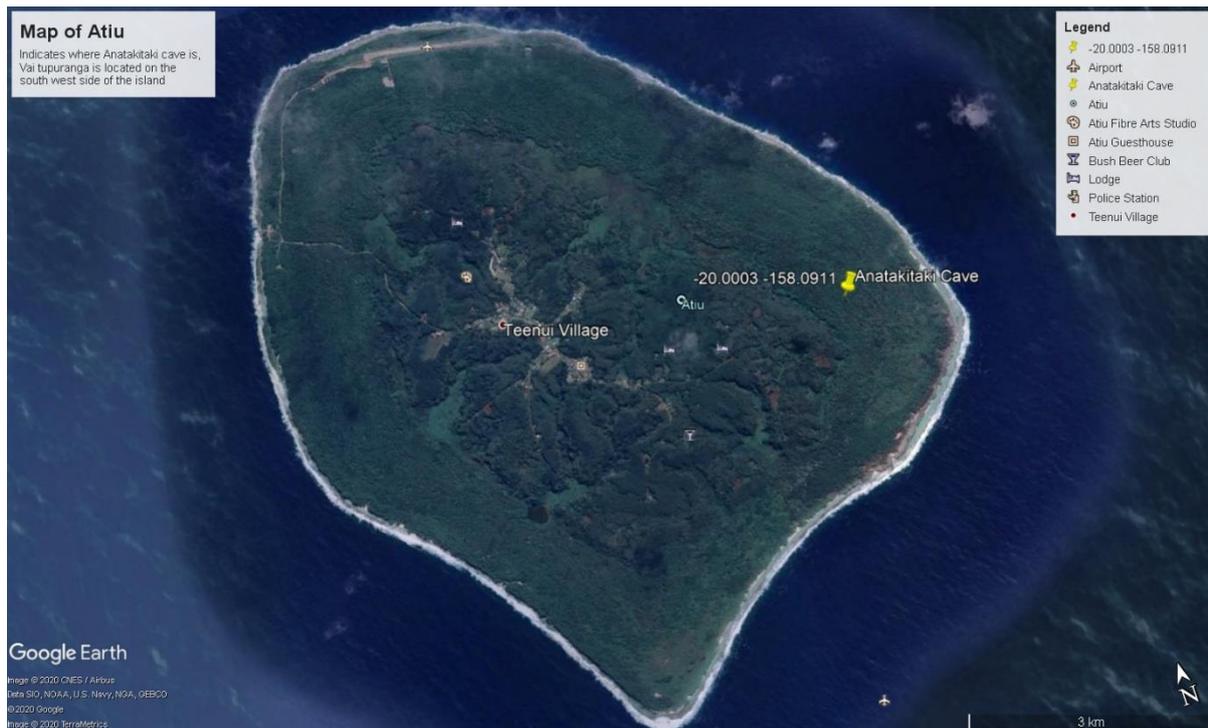


Figure 1. Map of Atiu pin pointing where *Anatakitaki* cave is. The exact position of *Vai tupuranga* is classified but it is described as being located on the south west side of the island.

Nesting population counts carried out by Tarburton during the 1987 breeding season reported around 380 adults between the two nesting caves (Tarburton 1990). The total number of adults was based on a count of 190 nests found between *Vai tupuranga* and *Anatakitaki* (116 and 74 nests respectively).

Similar surveying methods were used in 1994/95, with a slight reduction in adult numbers recorded. There were 172 nests found, giving a minimum total adult population of 344; *Vai tupuranga* had 90 nests, and *Anatakitaki* had 82 nests (G. McCormack 2014).

The following years (1995/96) found a slight increase in adult population numbers with a total of 175 nests identified, giving a minimum total of 350 adults between *Vai tupuranga* and *Anatakitaki* (106 and 69 nests respectively) (G. McCormack 2014).

Several years later in 2012, the average adult population for both caves was reported as 416, with 67 % in *Vai tupuranga* and 33 % in *Anatakitaki* (G. McCormack 2014). The lower numbers found in *Anatakitaki* were believed to be due to the fact that this particular cave was used for tours, whereas *Vai tupuranga* was not (G. McCormack 2014).

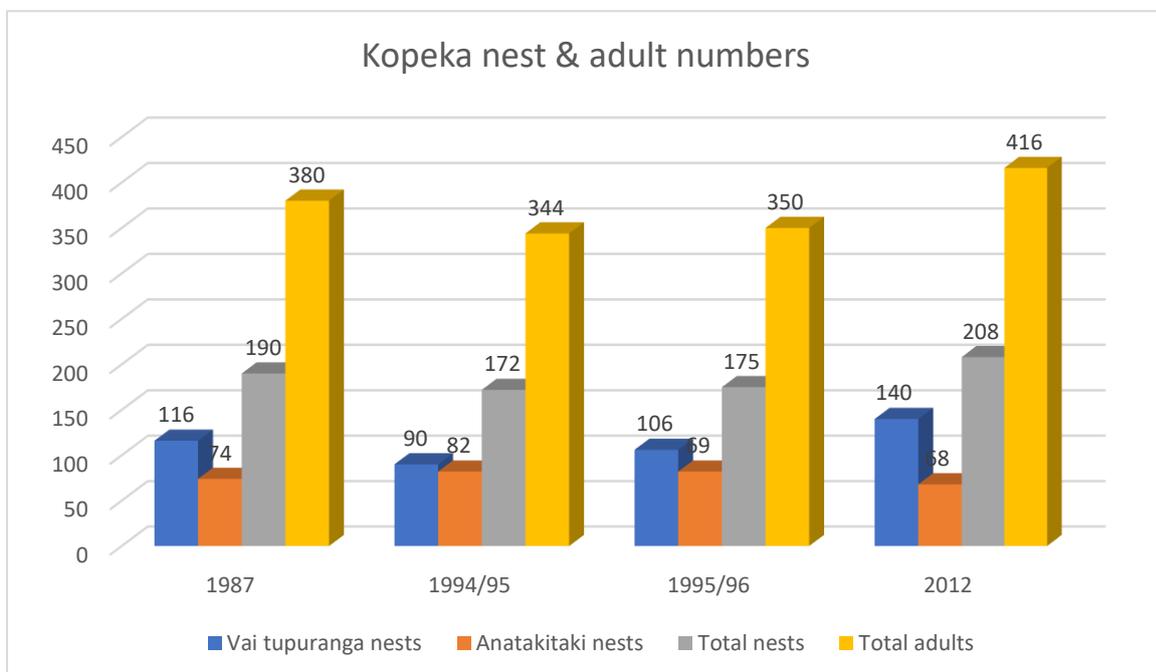
Current population

The 2012 population count was the last census conducted using the methodology developed by Gerald McCormack. In 2016-2017, M. Humphreys estimated that population numbers were around 600 adults in *Anatakitaki* alone (pers. Comm, 2020). This information, however, was not passed to the Natural Heritage Trust for inclusion in the biodiversity database, and raises speculations as to what surveying method was used. Therefore, to the current knowledge of the Director for the Natural Heritage Trust, total counts for both cave habitats of the *kopeka* have not been confirmed above 420 (G. McCormack pers comm. 2020).

In spite of this, future population numbers are expected to be stable with no adverse effects currently identified to impact population numbers (M. Humphreys & G. Matariki pers comms 2020).

Year	<i>Vai tupuranga</i> nests	<i>Anatakitaki</i> nests	Total nests	Total adults
1987	116	74	190	380
1994/95	90	82	172	344
1995/96	106	69	175	350
2012	140	68	208	416

Table 1. Total nest counts and total adult counts recorded between 1987 and 2012



Graph 1. *Kopeka* nest and adult numbers recorded between 1987 and 2012

Conservation status and management

The *kopeka* is listed as vulnerable in the IUCN Red List (IUCN, 2020; BirdLife International 2016). This vulnerable status is determined by its low population and restricted geographical range, as it is only currently found in two caves on Atiu (BirdLife International 2016).

As previously mentioned, natural threats include land crabs that feed on *kopeka* nests. The proportion of *kopeka* that nest in the twilight zone has been found to be more cluttered, possibly due to the absence of predators that hunt visually (Tarburton 1990).

Recreational activities such as guided *kopeka* tours have also been identified as potential threats causing reduced nesting numbers (G. Materariki pers. comm, 2020). Recreational tours have only ever occurred in one of the caves, *Anatakitaki*. Currently, guided *kopeka* tours are being run by Ben Isaia (M. Humphries, pers. comm).

At present, there are no official protection regulations in place for the *kopeka* or its habitats. Local *kopeka* tours run by Marshall Humphreys in the past applied unofficial guided regulations e.g. cave torches must only have a light intensity of a maximum 300 lumens whilst inside the cave (M. Humphreys pers. comms, 2020).

As the bird is not being hunted for food, it was generally accepted locally that there was no real need for any protection status to be established (G. Mateariki, M. Humphreys, pers. comms, 2020). However, the fact that tours are only being conducted in one of the two caves effectively results in a level of local and traditional protection for the other cave.

Ridge to Reef (R2R) Project Funding 2015-2021

A possibility to improve the conservation status of the *kopeka* is through translocation of some of the birds to another island. This would be a similar strategy to what has been achieved for the *kakerori*, where an insurance population has been taken to Atiu from Rarotonga. Such a translocation project is currently under consideration through the Natural Heritage Trust, with funding from the R2R project. Unfortunately progress has been delayed due to travel restrictions as a result of the Covid-19 pandemic (H. Weeks pers. comm, 2020). Mangaia has been identified as a possible suitable translocation site for the *kopeka*, as it is comprised of a similar geology with numerous cave systems. The translocation of the *kopeka* would provide an insurance population if the *kopeka* on Atiu were to suffer a drastic reduction in population due to disease or a devastating cyclone.

Conclusion

Despite unofficial local estimates, no official updated population surveys have been carried out over the R2R project period. Personal communications with G. McCormack in 2020 provide no evidence that the current population has exceeded 420 individuals between the two caves. Equally, there is no expectation that numbers have decreased, based on local observations of the population. We therefore conclude that the population size of the Atiu Swiftlet, whilst having not increased, has not decreased from the 2015 R2R baseline figure of 420 individuals, thus achieving the end-of-project target.

SRF #	Description of Indicator	End-of-project target level	End-of-project indicator	Target status
14b.1	Conservation of priority species at selected sites: Atiu Swiftlet (Atiu: 420)	No net decline in population	Total Atiu population: 420	Achieved

It is recommended that a full census is conducted to obtain an updated estimated figure, particularly now that the tourism industry has stalled as a result of the COVID19 pandemic and would therefore provide counts of a relatively undisturbed environment.

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