

Mohua Monitoring, South Branch Hurunui, 2016/2017

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BACKGROUND

From a low of seven known mohua in the South Branch Hurunui in 2007, numbers have been boosted through transfer of mohua from other areas. In October 2008 twenty mohua were introduced from Breaksea Island. Upon release these birds dispersed widely, with only ten birds being re-sighted. Seven of these were known to be in the valley for the breeding season, making a total of 14 mohua at the start of the breeding season. Five breeding pairs formed, producing 12 fledglings, and giving a total of 26 known mohua in the valley by the end of the 2008/2009 season.

At the start of the 2009/2010 season 18 mohua were found in the valley. An additional 21 birds were released from the Catlins in early October. Of these Catlins birds only seven were re-sighted that season, giving a total of 25 known mohua at the start of the season. These birds were monitored until Christmas 2009, at which stage five pairs were breeding, and a further two pairs were showing signs of breeding.

In the 2010/11 season only 16 adult birds were found in the valley over the course of the season, and ten fledglings were seen during January 2011. However three breeding pairs that were known to be nesting in December were unable to be found in January; all three pairs had nested in tinned trees, so presumably also added fledglings to the population. Of these three pairs, 2 of the 3 nest males were re-sighted in the 2011/12 season.

Intensive monitoring for the 2011/12 season was not carried out until January. Twenty adult birds were found (eleven male, nine female) with 13 fledglings from five pairs. One pair commenced nesting during January; it is unknown if this nest attempt was successful. It may be assumed that there were additional birds in the valley that we did not find in January, given that the previous season a number of birds found in December were not re-sighted in January.

Monitoring in the 2012/13 season was split between November and early January. With a six-week gap between the two trips, and a low number of banded birds in the population it was difficult to be precise about the number of birds found, but between 21 and 26 adult individuals were sighted. Of the 21 definites, only seven were female, with 13 males and one "probably male". During the January trip six or seven fledglings were also found, belonging to three family groups.

The 2013/14 season monitoring was undertaken during December. This was ideal timing as family groups were well settled into territories for nesting. Thirty to 31 mohua were sighted this season with most being found in the upper valley (only ten were found below the upper South Branch hut). These sightings were made up of 17 males, eleven females and two

unknowns. Of these, eleven pairs nested. The four nests found in the lower valley were protected with tin, while one out of the seven in the upper valley was protected in this way. Twelve new mohua were banded, bringing the total number of banded birds in the valley to 18 individuals.

The OFP team carried out monitoring in 2014/15. The team of 5 (Simon Elkington, Megan Farley, Corey Connor, Jamin Barkley and Andrew Legault) had trips to the valley in October, late November, mid-December and March/April. 34 birds were seen over the season, and 10 nests were found, although it was believed there were likely 12 breeding pairs. A further 2 pairs showed no indication of breeding, and 6 individual or helper birds were seen.

Monitoring in the 2015/16 season was carried out by Marion Rhodes and Jo Welsh. The valley was surveyed in mid-November, and then nests were found and either tinned for protection (below the top hut) or monitored (upper valley). Sadly, the population had suffered a significant decline, with only 24 adults seen over the course of the season. For the first time there was an excess of females in the population; of the 9 family groups, 5 had secondary females (there was also a single male “floater” in the valley). A number of nests failed, including two of the tinned nests, however all adults survived and re-nested. 5 birds were caught and banded (4 males, 1 female), taking the number of banded birds in the South Branch to 13.

2016/17 Season

Monitoring this season was carried out by Marion Rhodes and Jo Welsh. We were monitoring mohua nests in the Hawdon this season but not the South Branch, as the new Esk Head station manager had requested that we did not go through the station until the very end of November. As the Hawdon birds had begun nesting in early October, I thought December would be far too late to begin monitoring in the South Branch, although as it turned out, the South Branch birds nested much later than the Hawdon birds – only a few of the pairs had started nesting by the end of November, and those that had were all still at incubation stage. However the number of birds in the South Branch this season would have made nest monitoring in that valley a full-time job.

Our first visit to the valley this season was from 30 November to 7 December. We spent one full day mist-netting, with general lack of success (only one bird caught of the 6 that we tried for!). However most of this trip was spent surveying. As with previous seasons we surveyed the valley using the rat and stoat lines, as well as covering areas the rat lines don't go (Rockchicks stream, above the gorge, etc). We covered all rat and stoat lines above the fence twice. Our second visit was from 15 to 18 December. We spent some of this time confirming numbers of birds in areas where we were uncertain of exact numbers (due in part to the high proportion of un-banded birds – most notably Q and O blocks). We spent more time mist-netting, with slightly better results, catching 4 of the 8 birds we tried for. We also completed surveying by covering some ground below the fence – Jo covered the true right,

from the hut to the fence, while Marion covered the true left, from opposite the hut to the fence, and back down to about 1km below the hut.

45 adults were found in the valley this season, a marked increase from the 24 birds sighted the previous season. All 13 banded birds seen last season were present this season, as well as a large number of juveniles. As with the Hawdon, the winter of 2016 seemed to have been a good one for juvenile survivorship.

5 birds (all male) were caught and banded this season, bringing the total number of banded birds in the valley to 18. We encountered a distinct lack of interest in the playback this season, even when trying for un-banded pairs. Five of the pairs we tried for had incubating females – we actively tried to avoid catching the females where this was the case, however we didn't have to try very hard in many cases due to the general lack of interest!

MOHUA TERRITORIES

(See Map for locations – numbers correspond to map numbering)

1. M-WG (male) & UB (female).

A-block

This pair was first seen on 3 December by Marion. They were nesting (incubating), somewhere very close to (but not in) their nest cavity from last season. Jo saw them both again on 5 December.

2. UB x 4 (2x male, 2x female)

B-Block, Foggy Stream

These birds were seen on 3 December in Foggy Stream, not far in from the bush edge. They were clearly 2 pairs, although in close proximity to one another. We tried to mist net them on 5 December, but could not find them. When Jo found them later that day they had split up; one pair was roughly 250m uphill, while the other pair was 600m away, in A Block.

3. UB x 2

B Block

This pair was seen only once, on 5 December, by Jo. They were near the back of the terrace, 400m from Bong stream, feeding quietly together, and then disappeared uphill. Jo did not think they were breeding.

4. M-RR (male) & GM-GO (female)

B Block, Bong stream

This pair was found on 3 December, being very discreet, sitting around, not doing much and definitely not nesting. Jo saw them in the same area on 5 December, doing much the same, however they were nesting by 18 December. Their nest was not found.

5. UB x 2

D Block, Matagouri Stream.

Jo first saw this pair on 3 December, and located their nest. The female was incubating. Marion saw them again on 6 December. We tried to catch the male on 17 December (female still probably incubating, or possibly on small chicks), but he showed a complete lack of interest in our playback.

6. UB x 2

D Block

Jo first heard the female of this pair on the morning of 3 December, but was unable to locate the birds. In the same area in the afternoon she heard the pair down at the forest edge, and found them feeding, the female was doing lots of begging and feeding frantically, as when incubating. When Marion saw them on 6 December she also thought the female was nesting. However when we went to mist-net the male on 17 December we could find no trace of them, despite extensive use of the playback in the area we believed to be their territory.

7. M-YW (male) & M-BG (female)

E Block

Jo found this pair along with two un-banded birds in E block on 3 December. She saw them again later in the day on their own. When Marion found them on the morning of 6 Dec the female was seen nest-building in a red beech approximately 30m from their nest SBM04_15/16. They then flew downhill to join the un-banded pair and a bunch of brown creepers mobbing a long-tailed cuckoo.

8. UB x2

E Block

As mentioned above, this pair was first sighted with M-YW and M-BG on 3 December. On 4 December we tried to mist-net them, without success. They came over to the playback, but would not come down from the canopy, despite our fabulous set up, in a brilliant spot. They were a male/female pair (buzz calls and male song were heard on this occasion) but were clearly juveniles. Marion saw them again in roughly the same location on 6 December. There was no breeding behaviour seen on any of these days.

9. UB x 2

Rockchicks

This pair was seen on 5 December by Marion. They were found approximately 700m up Rockchicks stream, in roughly the same area as they were seen the previous January, when they were found with 3 fledglings. No breeding behaviour was noted, although they were not observed for long.

10. M-WR (male) & GM-W (female – was GM-GW)

Kiwi, true left.

MWR was found singing on his own on 5 December by Marion. After a 20 minute wait GM-W appeared and they foraged busily together – clearly nesting. Jo saw a similar pattern on 6 December.

11. UB pair, then M-WP (male) & UB (female)

Kiwi, true right

Marion found the young un-banded male singing on his own on 5 December. A female was heard coming off a nest, and he joined her. Jo saw them again on 6 December, and located their nest, right near TT9.02. We caught and banded the male of this pair on 16 December. The female still appeared to be incubating at this stage.

12. UB x 2

Q Block

The male of this pair was first seen on the morning of 1 December by Jo. Later that afternoon she heard the female come off a nest and located the pair feeding together. On 2 December Marion saw the male only. We attempted to catch him on 4 December, but he showed a total disregard for our playback – possibly we were too far from the nest. We were a little confused for some time as to whether this was the same or a different male from the “single male” seen below, but after catching and banding that bird we were able to confirm that this was a separate male. Jo checked the pair on 16 December to confirm both were un-banded, and thought the female was still incubating at this stage.

13. UB x 1, then M-WO

Q Block

Seen on 1 December by Jo, and 2 December by Marion, we managed to catch and band him on 4 December, which aided our coming to grips with who was who and doing what in Q block. On 16 December M/WO was seen with the UB female who had previously been hanging out with M/YR while his banded female (M/RK) was incubating.

14. M-YR (male), M-RK (female) & UB (female)

Q Block

Jo found M/YR and the un-banded female on 1 December and concluded they were not nesting. She did not see M/RK. Marion was watching the same two birds on 2 December. There was a second male (un-banded – later given M/WO bands) nearby, but the un-banded female was definitely associating with M/YR. After some minutes M/RK suddenly appeared and foraged madly before flying off with M/YR. She was clearly nesting. On 16 November, the un-banded female was seen foraging with M/WO. They were followed to the stream at the Q/N block boundary, where M/YR appeared. M/RK was not seen on this occasion – presumably she was still incubating or brooding.

15. M-GR (male?), M-GB (female?) & UB (female)

N Block

When Jo surveyed N Block on 1 December she did not find any mohua, although she thought she heard a single call near N8. When Marion surveyed on 2 December she also did not see or hear any birds, but returned with Jo to the N8 area in the late afternoon, and this time found what we thought was two birds, being generally quiet and sneaky. One was identified as M/GR, the other was not able to be identified before they shut up and disappeared. We returned on 16 December and eventually managed to locate the birds, and confirm 3 birds present. Still being quite quiet and sneaky; we were under the impression that M/GR and M/GB were a nesting pair, but wouldn't want to swear to which was male or female or even that they were definitely nesting!

16. M-YB (male) & UB (female)

O Block

Jo did not see this pair when she surveyed on 1 December; on 2 December when Marion was walking along the bush edge she heard male song, and found M-YB with an un-banded female who he then copulated with. On 16 December M/YB was seen with the M/YO nesting pair. M/YB's female was not seen on this occasion – presumably she was busy incubating.

17. M-YO (male; previously GM-YO), UB (female) & 2 x UB (juveniles – male +?)

O Block

This group was first seen in late afternoon on 1 December by both Jo and Marion. We heard calls as we were walking down valley on the grassy flats, and found the banded male with his un-banded female, and what we thought at that stage was a single fledgling, who was begging. On this day we could only see a metal band and a single yellow band on the male. On 2 December Marion spent some time following this group, and once again identified the male as M/Y. Also seen were the un-banded adult female, and an un-banded juvenile male, who was heard singing not terribly well. A fourth bird was heard begging in a different tree. Once again I assumed this was a fledgling, but later realised it was much more likely to be a second juvenile from last season, still being fed by the parents. The adults showed no sign of breeding at this stage. Jo also saw this group later the same day, back on the bush edge, and recorded them as M/Y male, UB female and 2 x UB juveniles.

On 16 December Marion and Jo found the adult pair again – this time they were clearly in breeding mode, with the UB female begging and being fed by the male. Marion also got a really good look at the male's bands as he was down low, and this time saw the orange band, looking quite faded, and also partially obscured by the much brighter yellow band. Neither of the juveniles was seen on this occasion.

18. UB pair, then M-OO (male) & UB (female)

P & O blocks

This pair was first found on the true left of the river in P Block on the morning of 2 December by Jo. Marion had not seen or heard them when she surveyed P block the previous day. Jo heard male and female calls from amongst a large mixed flock of birds, and saw the female feeding busily and doing lots of buzz calls. She followed the birds for 45 minutes but did not

see the male despite hearing him lots and concluded the pair were not nesting. When she returned to P block in the afternoon she was unable to locate the pair. They were not seen again until 16 December when Jo and Marion investigated calls heard at the bush edge near the O/N block boundary and found an un-banded pair, not previously seen during any of our surveying on the true right of the river (the other un-banded pairs on the true right above the hut were both nesting some distance from this location). It therefore seems likely to have been the same pair, which could easily cross the valley not far upstream at the “gorge”. On 17 December the birds were found slightly further up-valley, and we caught and banded the male. The female bounced out of the net twice before becoming wary.

19. UB pair, then M-PG (male) and UB (female)

True left, Waterfall creek

On 1 December Marion found the male of this pair foraging and making occasional song. After 11 minutes a female was heard coming off her nest. The male was seen to be un-banded, but the female was not identified. Jo found the male singing in the same area on 2 December, and after a 20 minute wait the female was heard. Jo was able to confirm both birds were un-banded. On 17 December the male was caught and banded; the female was heard coming off her nest about 10 minutes after the male was released.

20. UB pair, then M-PB (male – “Peculiar Bill”) and UB (female)

Above the ‘gorge’, true left of main river

This pair was first seen on 1 December, when Marion heard chatter and female buzz calls up the hill. A noisy female was found, and eventually a much quieter male was also seen. Jo saw one of the pair and heard the other. On 17 December we caught and banded the male. We were fairly sure this pair was not nesting; the female was around the whole time we were there, but she was warier than the male, and we did not catch her. Both birds were thought to be at least 2 or 3 years old. The male had a highly unusual “crossed bill”, with the upper bill curved down over the lower bill about halfway along its length.

CONCLUSION

It was very encouraging to find so many birds in the South Branch this season. Not only was it the highest number of mohua recorded in the valley since before the first translocation in 2008, but it was the fastest rate of increase I have seen in the years since I started monitoring the South Branch population in 2010/11. Usually there is a very high over-winter mortality of juveniles, but this past winter was remarkably good for juvenile survivorship both here and in the Hawdon. It was also good to see a relatively even sex ratio, with what appeared to be 20 potential breeding pairs from 45 birds.

The mohua seemed remarkably averse to being caught in mist-nets this season, despite the large number of juveniles who should have been totally naive. I was very surprised to try for an un-banded breeding pair and have such a complete lack of interest in the playback.

While mohua numbers in the valley are definitely improving, I still think it would be prudent to plan another translocation for both the South Branch and the Hawdon. Not only are numbers still precariously low in both valleys, such that another hard winter (such as that of 2 seasons ago) will make a serious dent in the populations, but both populations underwent a bottleneck of only 16 birds, so the genetics of both populations would benefit from a bit of variety. For this reason I would rank the Hawdon of higher priority for a translocation than the South Branch – not only does the Hawdon have a significantly smaller population than the South Branch, when the Hawdon went through its bottleneck, all the birds were from the same gene pool (Chalky Island). When the South Branch mohua population reached its low point, it still had birds of three distinct origins – Breaksea Island, the Catlins and original South Branch Hurunui birds. I assume that this variety would make the South Branch the genetically stronger population of the two.

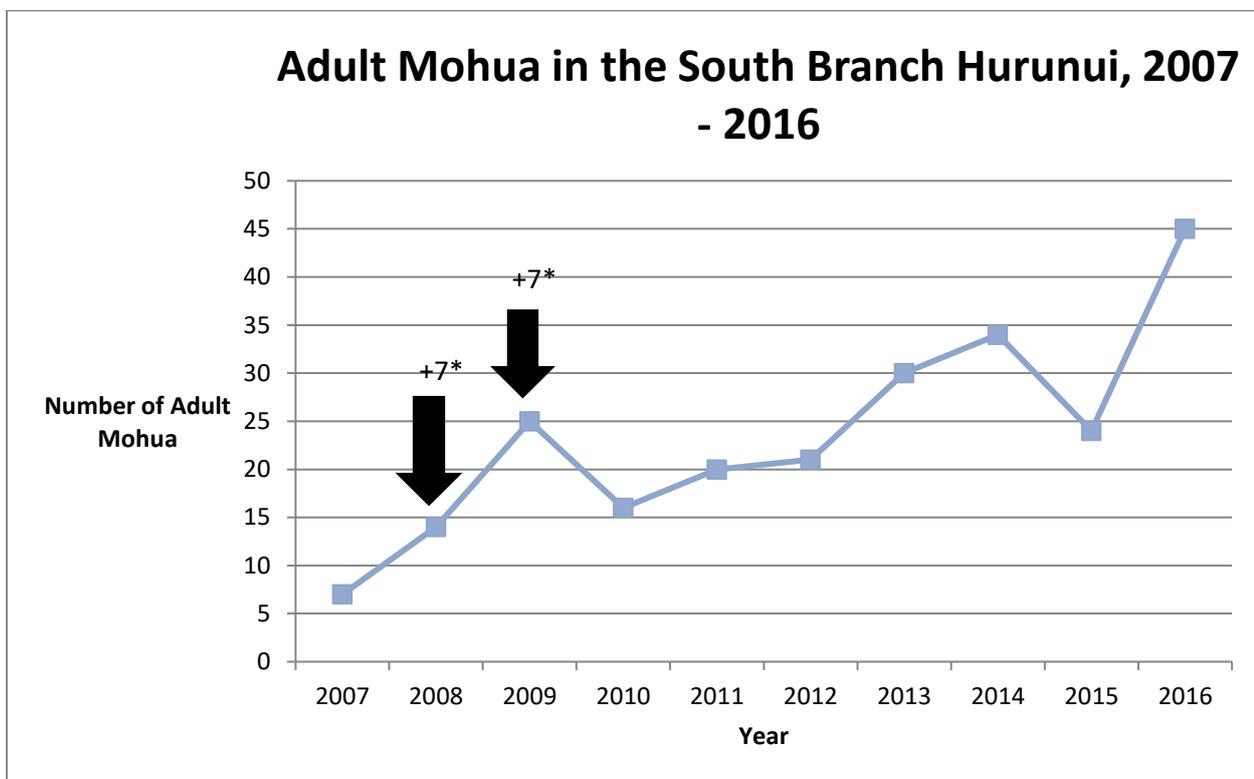
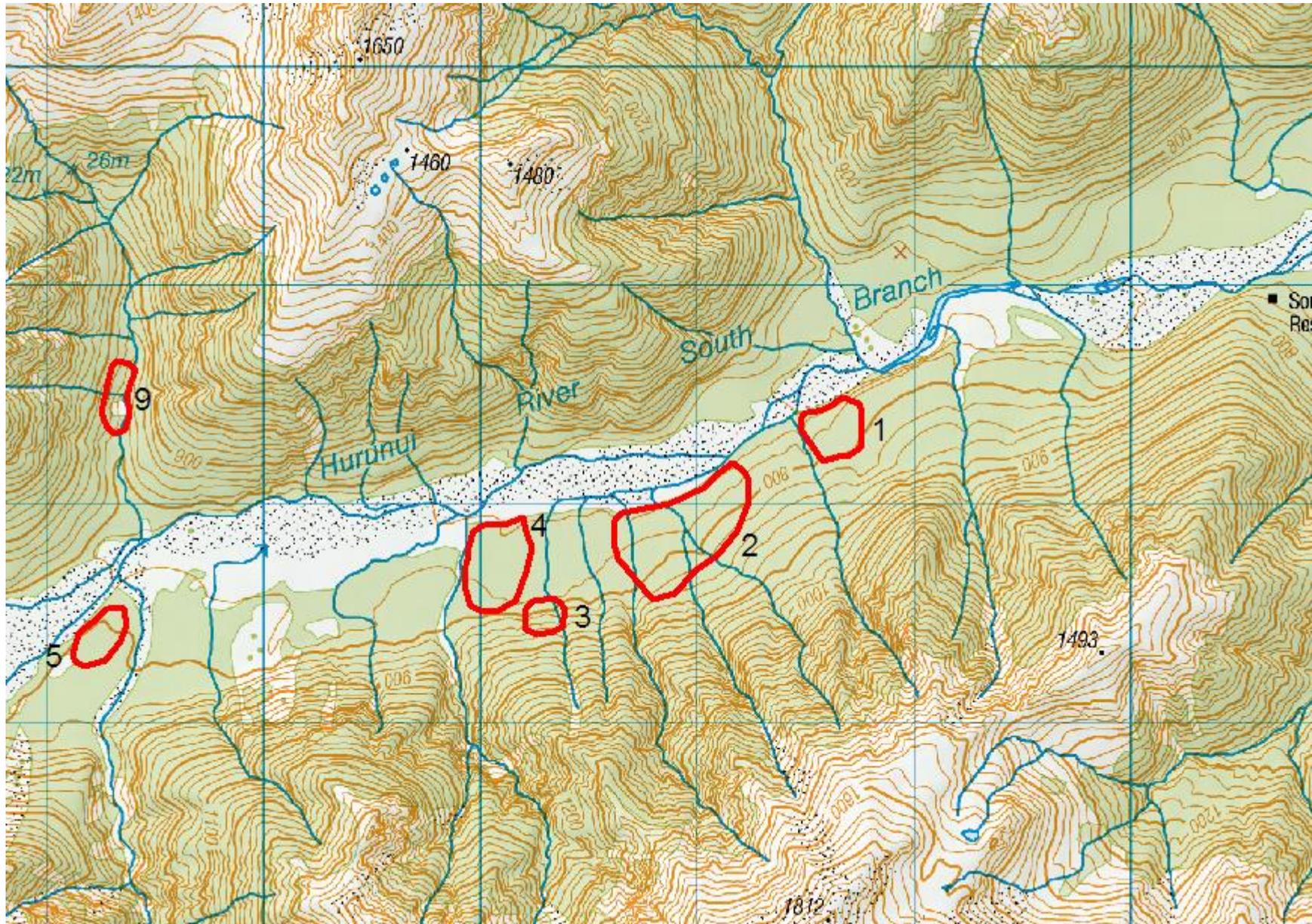


Figure 1: Population trend of adult mohua in the South-Branch of the Hurunui 2008-2016

*Indicates addition of translocated mohua (only birds re-sighted post release added to total).

MAP 1. Mohua territories in the lower South Branch of the Hurunui, December 2016



MAP 2. Mohua territories in the upper South Branch of the Hurunui, December 2016

