

# Blue duck (whio)

Survey of the distribution and  
abundance of blue duck (whio) in  
Kahurangi National Park 2009

JULY 2010



Department of Conservation  
*Te Papa Atawhai*

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## Survey of the distribution and abundance of blue duck in Kahurangi National Park 2009

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**Cover photo:** Blue duck (whio).

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# Abstract

Whio, *Hymenolaimus malacorhynchos* are nationally endangered. Internal management guidelines have recommended surveying populations to estimate their size and range. This survey is a repeat of a previous one done over the summer of 1999/2000 to estimate the population in a number of the rivers in the north west catchments of Kahurangi National Park. The results showed very little change in numbers of whio seen in comparison with the previous survey. In 1999/2000 the survey found 54 adults made up of 19 pairs and 16 singles with 24 ducklings whereas in 2009 there were 52 adults made up of 16 pairs, 20 singles with 5 juveniles and 4 ducklings. The second survey was later than the first which may have led to fewer ducklings being detected. Almost half of all whio (six pair, eight singles and two juvenile) were found in just two areas – Goulard Downs and the Waingaro River.

## 1. Introduction

Whio were surveyed in Kahurangi National Park over the summer of 1999/2000 to establish their abundance and distribution (Studholme 2000). We repeated this survey during January to March 2009 and the results are reported here. There were a few variations driven by weather and river conditions, and was completed in one season unlike the first survey that took two summers. The previous survey found an estimated minimum total of 54 adults (19) pairs in Kahurangi National Park. A total of 52 adults (16 pairs) were located this year. The two-person walking survey technique was used as recommended on all rivers due to its reliability and cost effectiveness.

## 2. Objectives for the 2009 whio survey

To compare the distribution and abundance of whio within Kahurangi National Park with the previous survey (Studholme 2000), particularly after the amount of pest control work that has been done in these catchments.

### 3. Survey area

Kahurangi National Park covers an area of 452,002 hectares and is the second largest of New Zealand's 13 national parks. It encompasses much of the north-west South Island. A selection of rivers draining the north-west corner of the park were surveyed. These include the Waingaro, Anatoki, Aorere, Anatori, Anaweka, Kahurangi, Turimawivi, Parapara, and Big catchments. The remaining rivers in the south of the park, the Owen, Wangapeka and Matiri catchments, were surveyed by DOC, St Arnaud, between 1994 and 1998 (Studholme 2000). Some of the whio population they contain are being managed at present but a repeat survey has not been completed.

### 4. Methods

The survey ran from 5 January to 26 March 2009. Due to the crepuscular habits of whio, the best time to survey was during the three to four hours after dawn and from 4 pm to an hour before dark. Most surveys were conducted in the morning between 0600-1000 hrs and in the evening between 1600-1930 hrs. Whio are most active on the river at these times and therefore are most conspicuous during these hours. Some surveys were conducted outside of these hours due to logistical constraints.

Most work was conducted by using the two-person walking survey technique as this was found to be the most reliable method. For details on this method refer to Studholme (1999). Time and weather constraints meant that it was decided to include as part of the survey whio sightings from a reliable tramper who walked the lower Waingaro River when it was at record low flow although he did not use the standard survey technique.

Walkers recorded all whio sign (droppings and feathers) seen during surveying. A grid reference was recorded at the site (using GPS) where all sign was found in a section of river. If several pieces of sign were found within 20 metres they were recorded on the same point. If a single piece of sign was found and it was at either end of a series of sign it was assumed that the birds' territory was 250 metres either side of it. The shortest record of whio territory length is approximately 1 km (Williams, 1991a) and therefore it is reasonable to assume there would be whio activity 500 metres either side of any sign found.

Sections of river along which who sign was found were highlighted on the distribution maps (Figures 5.1- 5.8). The highlighting started at the first sighting of sign and continued along the river as long as the sign events were within 500m of each other. The highlighting stopped when there was no further sign seen or when the next sign event recorded was more than 500m away. When a sign event was found alone with no sign within 500m either side of it, the river was highlighted 250m either side of the sign event.

## 5. Results

The area surveyed by walkers, the who sign found and the who sightings are shown in Figure 5.1. The number of who found in each river and the distance surveyed is shown in Table 1. A total of 52 adults (16 pairs, 20 singles), five juveniles and four ducklings were found. Seven singles were identified as males by their call, one as a female and the remaining 12 were of unknown sex. Several stretches of river were surveyed only in 1999 and data for these have been omitted from Table 1 to allow a better comparison over the ten year period.



**Figure 5.1: Rivers surveyed, who seen and who sign recorded during 2009 survey of Kahurangi National Park**

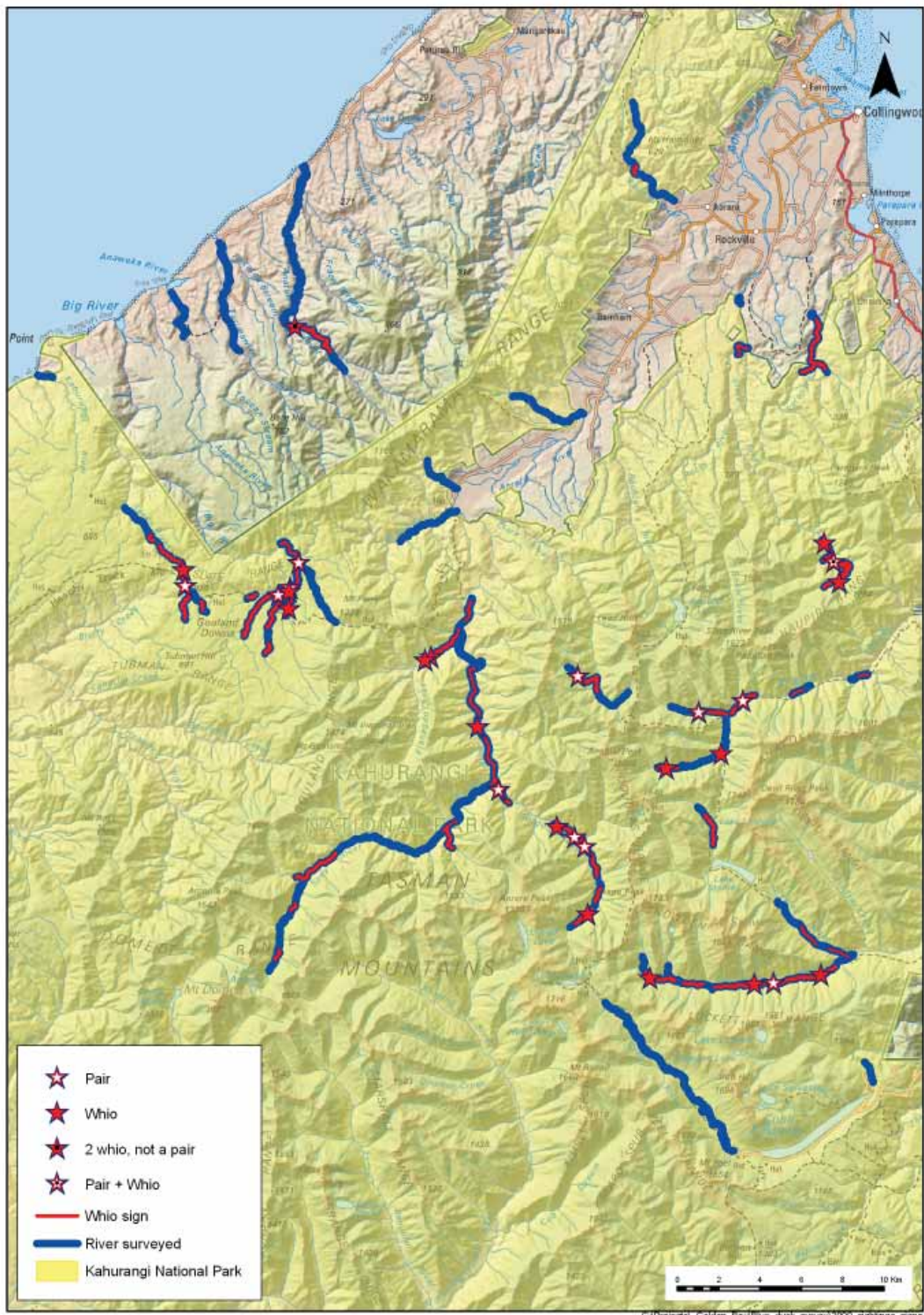


TABLE 1. NUMBER, AGE AND SEX OF WHIO, CATCHMENT NAME AND COMPARISON OF ABUNDANCE OF WHIO AND PRESENCE OF SIGN WITH PREVIOUS SURVEY

RIVER	WHIO SEEN 1999/2000	WHIO SEEN 2009	WHIO SIGN 1999	WHIO SIGN 2009
Cobb River (14km)	0	2 adults (1 pair), 4 ducklings*	N	Y*
Aorere (12km)	6 adults (2 pair, 2 singles), 5 ducklings	1 adult	Y	Y
Spey River (12km)	0	Sign only	N	Y
Taheke Stream (0.5km)	1 adult	Sign only	Y	Y
Flanagans (3km)	2 adults (1pair)	2 adults (2 males)	Y	Y
Denton Creek (4.5km)	0	0	N	N
Brown River (3.5km)	0	0	N	N
Walsh Creek (2.5km)	0	0	N	N
Kaituna River (8.4km)	0	Sign only	N	Y
Webb Stream (12.5km)	NA**	Not surveyed in 2009	NA	NA
Anaweka River (3.5km)	0	0	N	N
Anatori River (14.5km)	0	2 adult males	N	N
Turimawiwi River (5.5km)	0	0	N	N
Kahurangi River (1km)	3 adults (1 pair, 1 single)	0	Y	N
Stanley River (10km)	Sign only	Sign only	Y	Y
Anatoki River (12km)	9 adults (4 pairs, 1 single), 12 ducklings	6 adults (2 pair, 2 single males)	Y	Y
Waingaro River (31km)	7 adults (2 pairs, 3 singles), 5 ducklings	4 adults (1 pair, 1 single female, 1 single) 1 juvenile	Y	Y
Waingaro River * (lower)	2 adults (1 pair)	10 adults (2 pair, 6 single), 1 juvenile		
Lindsay Creek (1km)	NA	Not surveyed in 2009	NA	NA
Devil River and Little Devil River (6km)	NA	Not surveyed in 2009	NA	NA
Parapara River (4.5km)	0	Sign only	N	Y
Burgoo	7 adults (3 pair, 1 single), 2 ducklings	7 adults (3 pair, 1 single male), 1 juvenile	Y	Y
Upper Slate River (6.5km)	3 adults (1 pair, 1 single)	4 adults, (1 pair, 2 singles), 1 juvenile	Y	Y
Lower Slate River (1km)	0	Sign only	N	Y
Clark River (7.5km)	4 adults (1 pair, 2 single)	2 adults (1pair)	Y	Y
Cave Brook (1.8km)	2 adults (1 pair)	2 adults (2 singles)	Y	Y

RIVER	WHIO SEEN 1999/2000	WHIO SEEN 2009	WHIO SIGN 1999	WHIO SIGN 2009
Saxon River (9km)	3 adults (3 single)	2 adults (1 pair), 1 juvenile female	Y	Y
Blue Duck Stream (1.5km)	Sign only	Sign only	Y	Y
Weka Stream (500m)	0	Sign only	N	Y
Big River (7km)	7 adults (2 pairs, 3 singles)	6 adults (3 pair)	Y	Y
Shiner Brook (2km)	Sign only	Sign only	Y	Y
Corkscrew Stream (1km)	Sign only	0	Y	N
Perry Creek (3km)	0	0	N	N
Gouland Creek (500m)	NA	Not surveyed in 2009	NA	NA
Heaphy River	NA	Not surveyed in 2009	NA	NA
Kohaihai River (13km)	NA	Not surveyed in 2009	NA	NA
Oparara River (18.5)	NA	Not surveyed in 2009	NA	NA
Nimrodel Creek (4km)	NA	Not surveyed in 2009	NA	NA
Galadriel Creek (2.5km)	NA	Not surveyed in 2009	NA	NA
Postal River (6km)	NA	Not surveyed in 2009	NA	NA
Celeborn Creek (2.5km)	NA	Not surveyed in 2009	NA	NA
<b>GRAND TOTALS</b>	<b>1999/2000</b> 54 ADULTS: 19 pairs, 16 singles, 24 ducklings	<b>2009</b> 52 ADULTS: 16 pairs, 20 singles, 5 juveniles, 4 ducklings	<b>16</b>	<b>20</b>

\* casual observations not using standard survey technique

\*\* results from 1999 are not comparable so have been left out

## 5.1 TIMING OF SURVEY

The survey did not coincide with when whio are most conspicuous at the beginning of the duckling-rearing period. Rather it was during the moult - when the birds were less visible. Very wet weather during spring and budgetary constraints led to the decision to postpone the survey to the new year. Most surveying was conducted in the morning between 0600-1000hrs. The evening survey time period 1600-2000hrs was utilised as much as possible. Weather and time limitations dictated that some sections were walked during the middle of the day. Although there was a reduced chance of seeing whio at this time of day, feathers and faeces were visible at any time.

## 5.2 DISTRIBUTION AND ABUNDANCE

In Table 1 distances in brackets are distances surveyed, not the actual length of the river or stream. Grid references of whoio sightings can be found in Appendix 1.

The Waingaro River and Big River and its tributaries each held the equal highest concentrations of whoio. Both of these locations averaged one bird every 2.2 km. Together they provided almost half of all records of whoio in this survey. In comparison the rest of the rivers averaged one bird every 7 km with the combined rate being one bird every 3.6 km.

The average number of ducklings per pair was unable to be estimated as the survey was not done at the optimal time of year to observe them.

**Figure 5.2: Taitapu estate and Kahurangi River**  
 recorded during 2009 survey of Kahurangi National Park



### 5.2.1 Tai Tapu Estate and Kahurangi River (Figure 5.2)

#### *Anatori River (14.5 km)*

Two birds were seen roosting together and behaving as a pair. One was a captive raised male, banded blue/white. The other bird was a wild male.

**Total:** 2 males behaving as a pair

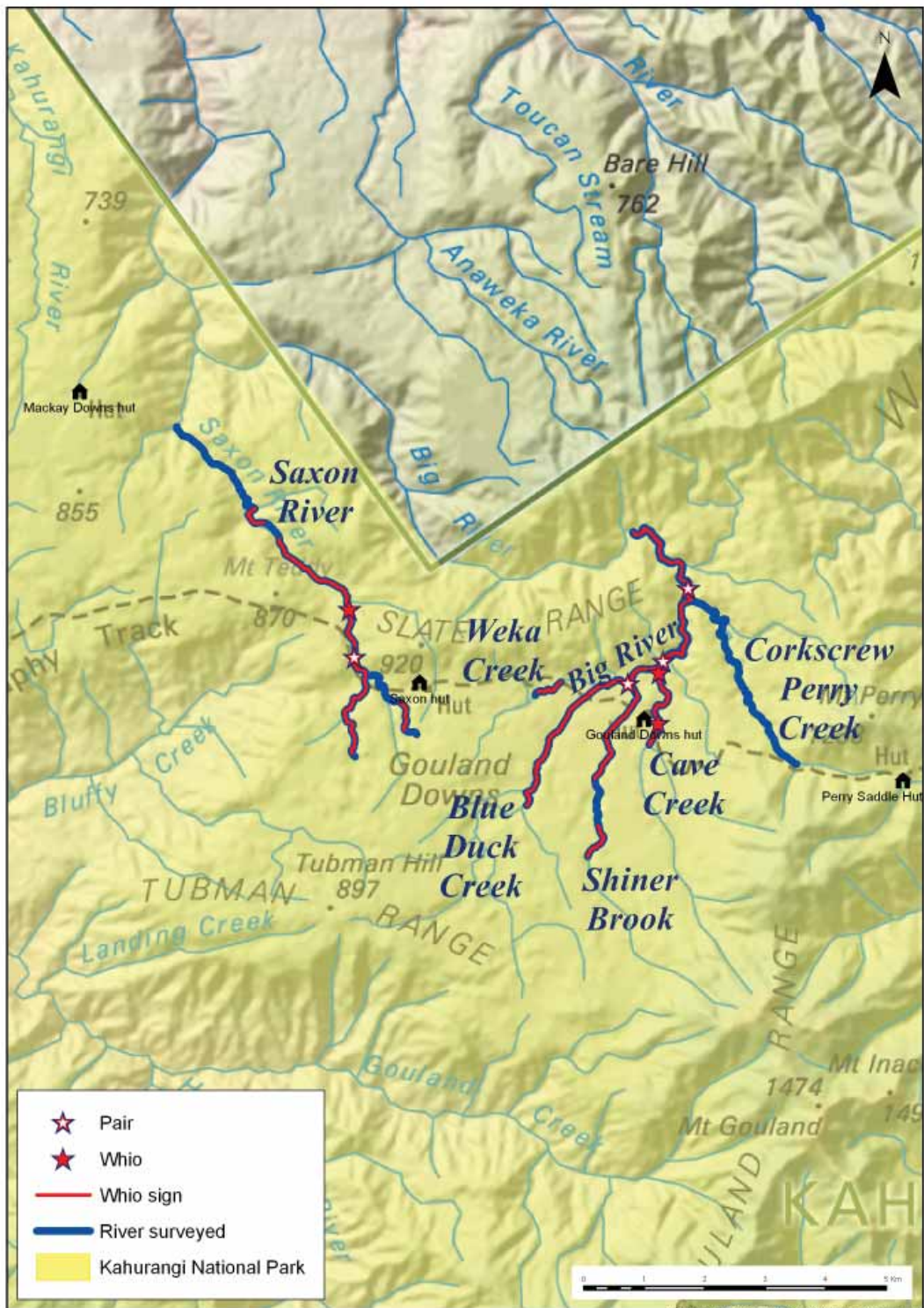
#### *Turimawiwi River (5.5 km) and Anaweka River (3.5 km)*

No who sign was found in these rivers. The last sighting of who in the Turimawiwi River was in 1980. There have been no recorded sightings in the Anaweka.

#### *Kahurangi River (1 km)*

No sign of who was found in this river. One pair and a single who were seen in the lower Kahurangi River in 1999.

**Figure 5.3: Big River and tributaries**  
 recorded during 2009 survey of Kahurangi National Park



## 5.2.2 Big River and tributaries (Figure 5.3)

### *Big River (7km)*

Three pair of who were seen on Big River. Two of these pair had banded females. The first was M-Blue O, banded in 2004. The second female, Y-R, came from a group of WHIONE juveniles (incubated and raised from wild eggs) and released at Gouland downs in April 2007. The third pair was unbanded.

**Total:** 3 pairs

### *Shiner Brook (2km)*

Sign was seen on Shiner Brook but no who.

### *Cave Brook (1.8 km)*

Plenty of sign and two separate adult birds of unknown sex were seen. Most commonly seen on this waterway is a pair with a banded female, M-RW.

**Total:** 2 singles

### *Weka Stream (500 m)*

One piece of sign was seen in the small section of Weka Creek that was surveyed.

### *Corkscrew Creek and Perry creek (4 km)*

No who or sign of who was found in these rivers. However, who have been regularly recorded in these streams during surveys over the past two years.

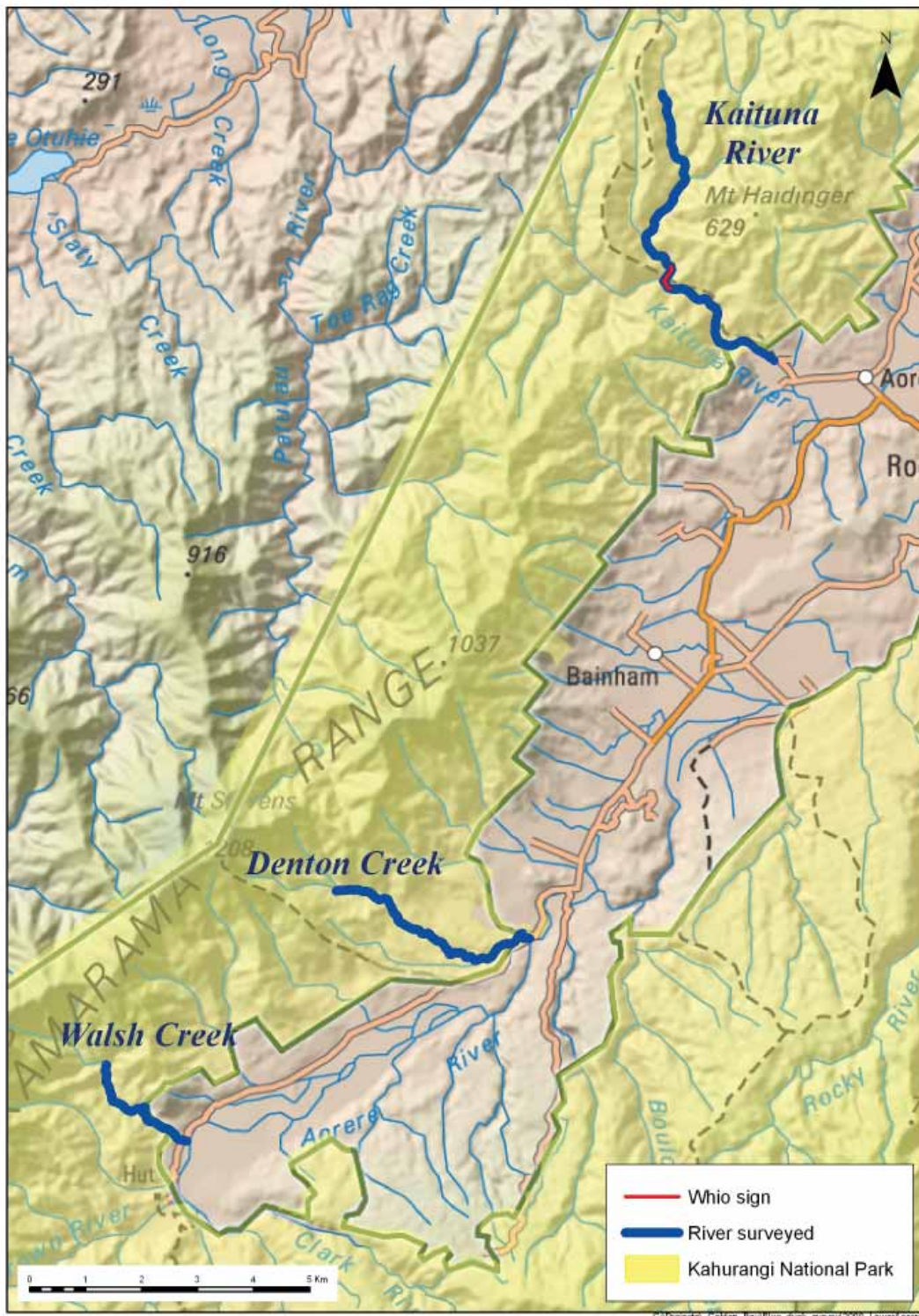
### *Saxon River (9 km)*

One pair was found close to the Heaphy Track as well as one juvenile female about 1 km downstream.

**Total:** 1 pair, 1 juvenile female



**Figure 5.4: Lower Aorere tributaries**  
 recorded during 2009 survey of Kahurangi National Park



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### 5.2.3 Lower Aorere tributaries (Figure 5.4)

#### *Kaituna River (8.4 km)*

One piece of sign of whio was found in the Kaituna River at the forks. The true left fork was followed up from this point and no further sign was found.

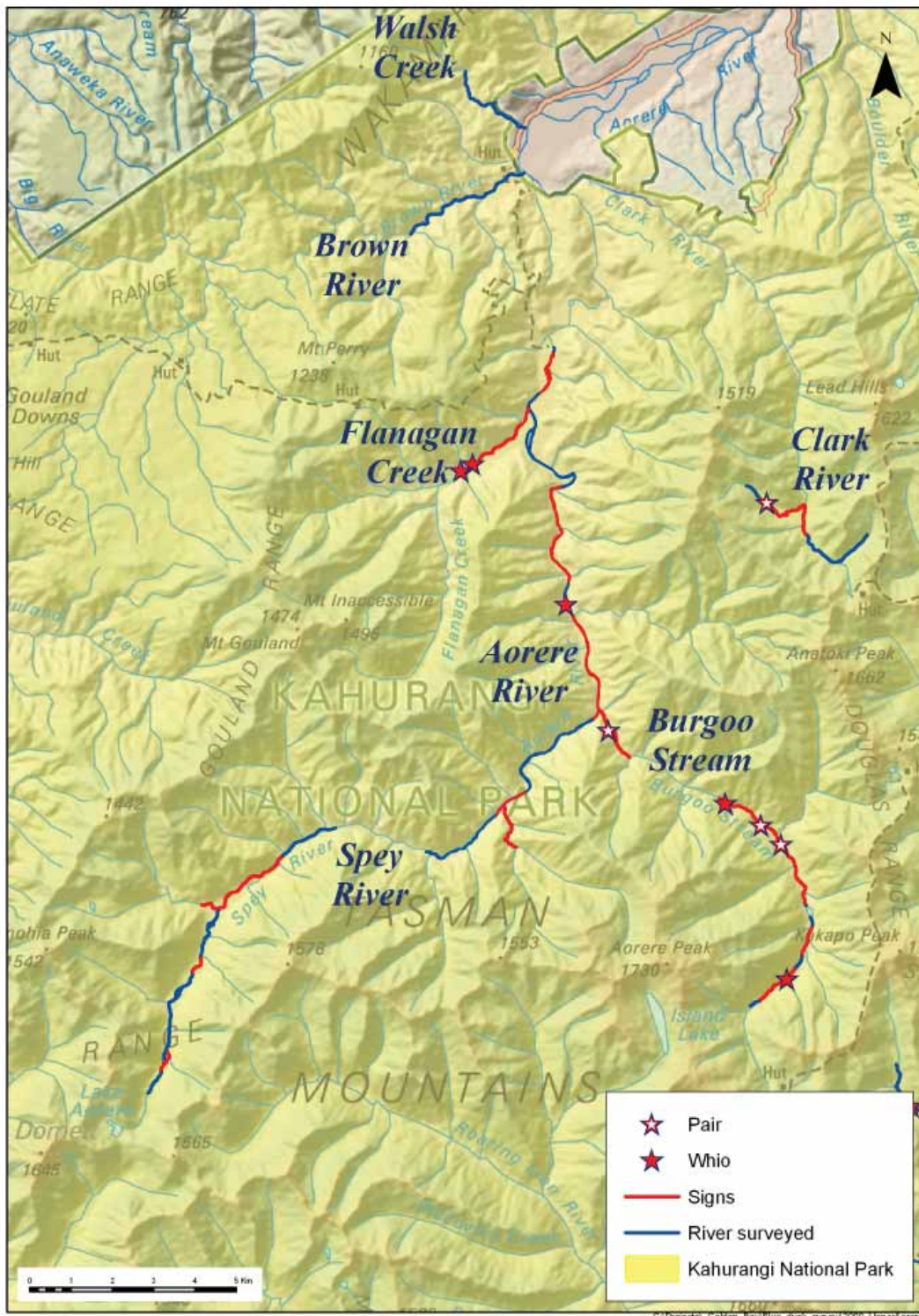
#### *Denton Creek (4.5 km)*

No whio or sign of whio was found.

#### *Walsh creek (2.5 km)*

No whio or sign of whio was found.

**Figure 5.5: Upper Aorere and tributaries**  
 recorded during 2009 survey of Kahurangi National Park



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#### 5.2.4 Upper Aorere and tributaries (Figure 5.5)

##### *Flanagan Creek (3 km)*

Two single males were seen.

**Total:** 2 singles

##### *Clark River (7.5 km)*

One pair was seen in the true left branch of the Clark River. No birds and very little sign was found outside the left branch. The main branch of the river seemed less than optimal habitat.

**Total:** 1 pair

##### *Brown River (3.5 km)*

The lower reaches of the Brown River was surveyed and no sign was found.

##### *Burgoo River (8.5 km)*

The Burgoo was surveyed in two parts, missing out the gorge between the upper and lower sections. One pair was seen in the lower section and one pair, a single male and a juvenile were seen in the upper section.

**Total:** 2 pairs, 1 single male, 1 juvenile

##### *Spey River (12 km)*

Unlike the previous survey sign was found in the Spey and was particularly concentrated in the 2 km below Taheke stream. No birds were seen.

##### *Taheke Stream (500 m)*

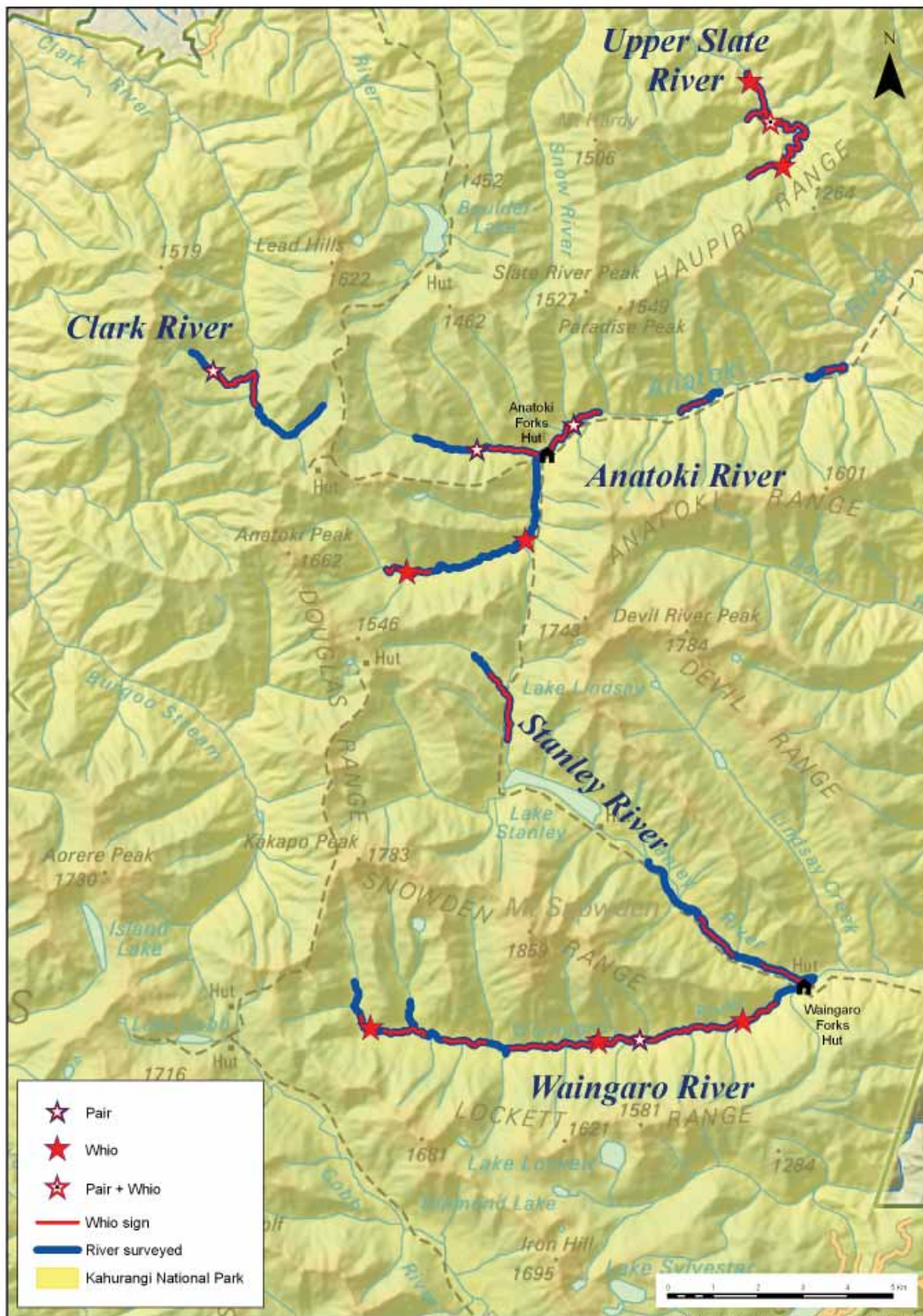
A little sign was found but no birds were seen.

##### *Aorere River (12 km)*

Poor weather plagued this section during the last survey. Fine weather and low water levels made it much more pleasant and productive this time. Sign was detected all along the Aorere, but in two sections in particular. One was the side creek on the true right between the Aorere/Spey confluence and the Burgoo and the other section was 2.5 km down stream of the Aorere/Burgoo confluence where one bird was seen.

**Total:** 1 single

**Figure 5.6: Anatoki and Waingaro catchments**  
 recorded during 2009 survey of Kahurangi National Park



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## 5.2.5 Anatoki and Waingaro catchments (Figure 5.6)

### *Waingaro River (31 km)*

The Waingaro River was surveyed down as far as Waingaro Forks Hut. An adult and a juvenile were seen in the upper reaches of the Waingaro River. A male and female were seen separately in the middle reaches and a female about 1 km upstream of Waingaro Forks Hut. Additional casual observations from the section below the hut were gathered from a local trumper, Mik Symmonds.

Results using standard survey technique: 4 adults: (1 pair, 1 single female, 1 single) and 1 juvenile.

Casual observations: 10 adults: (2 pair, 6 single) and 1 juvenile.

### *Stanley River (10 km)*

Sign was found in the Stanley River but no birds were seen.

### *Upper Stanley River (2.5 km)*

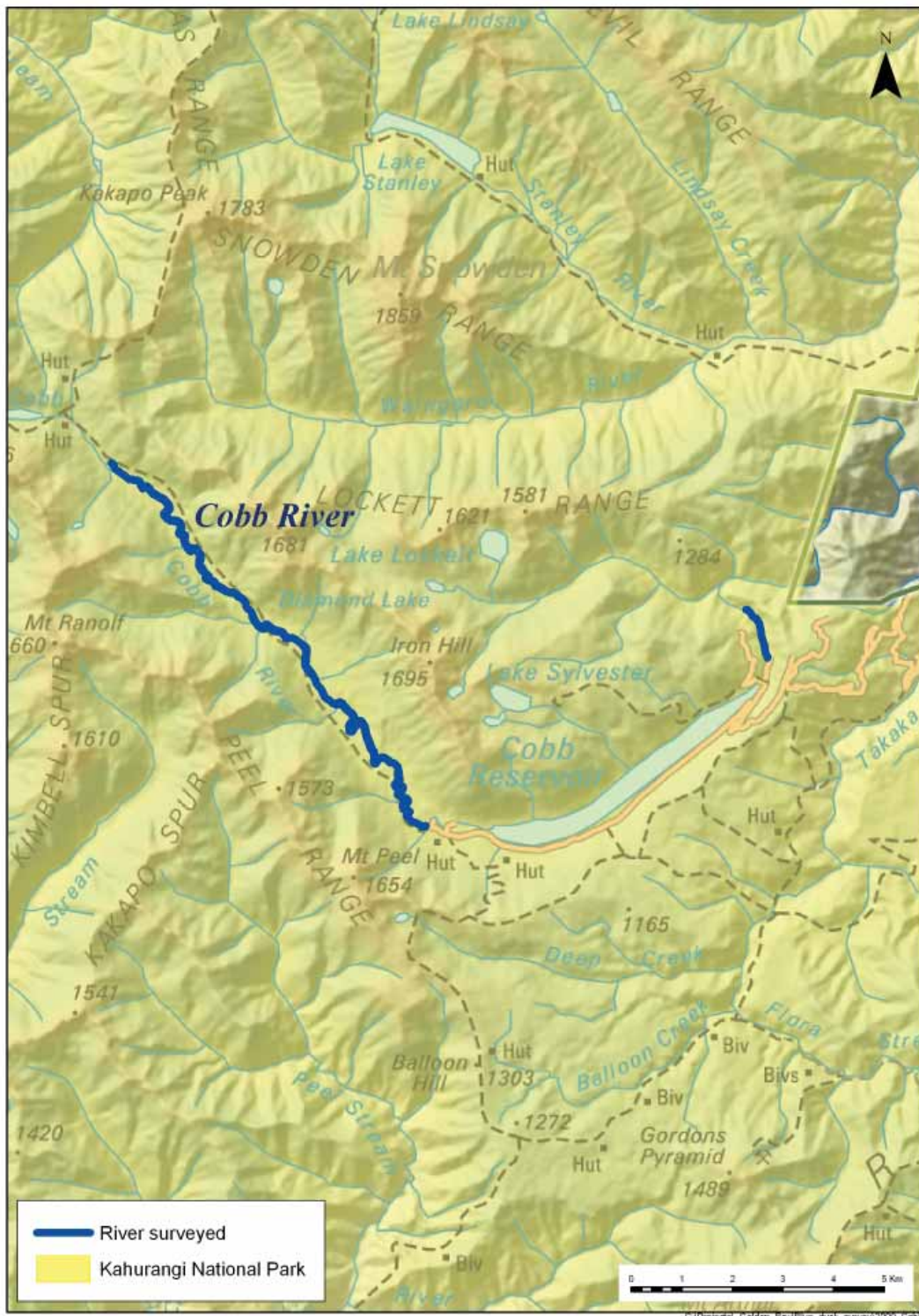
Sign was found in the upper Stanley River but no birds were seen. A shorter survey was done on this time than in 1999. This time the true right branch was not surveyed nor was the upper 800 metres of the true left branch.

### *Anatoki River (12 km)*

One pair were seen downstream of Anatoki Hut, another pair in the true right branch, one male in the true right branch and another where this branch meets the track. Regular sightings of a single who were made by trampers over the summer at spot height 744 in the true right branch. The rest of the river from Paradise Creek to Anatoki bend was surveyed intermittently, where the terrain allowed, and who sign was found. This section was surveyed by helicopter during the last survey.

**Total:** 6 adults (2 pair, 2 single males)

**Figure 5.7: Cobb River**  
 recorded during 2009 survey of Kahurangi National Park



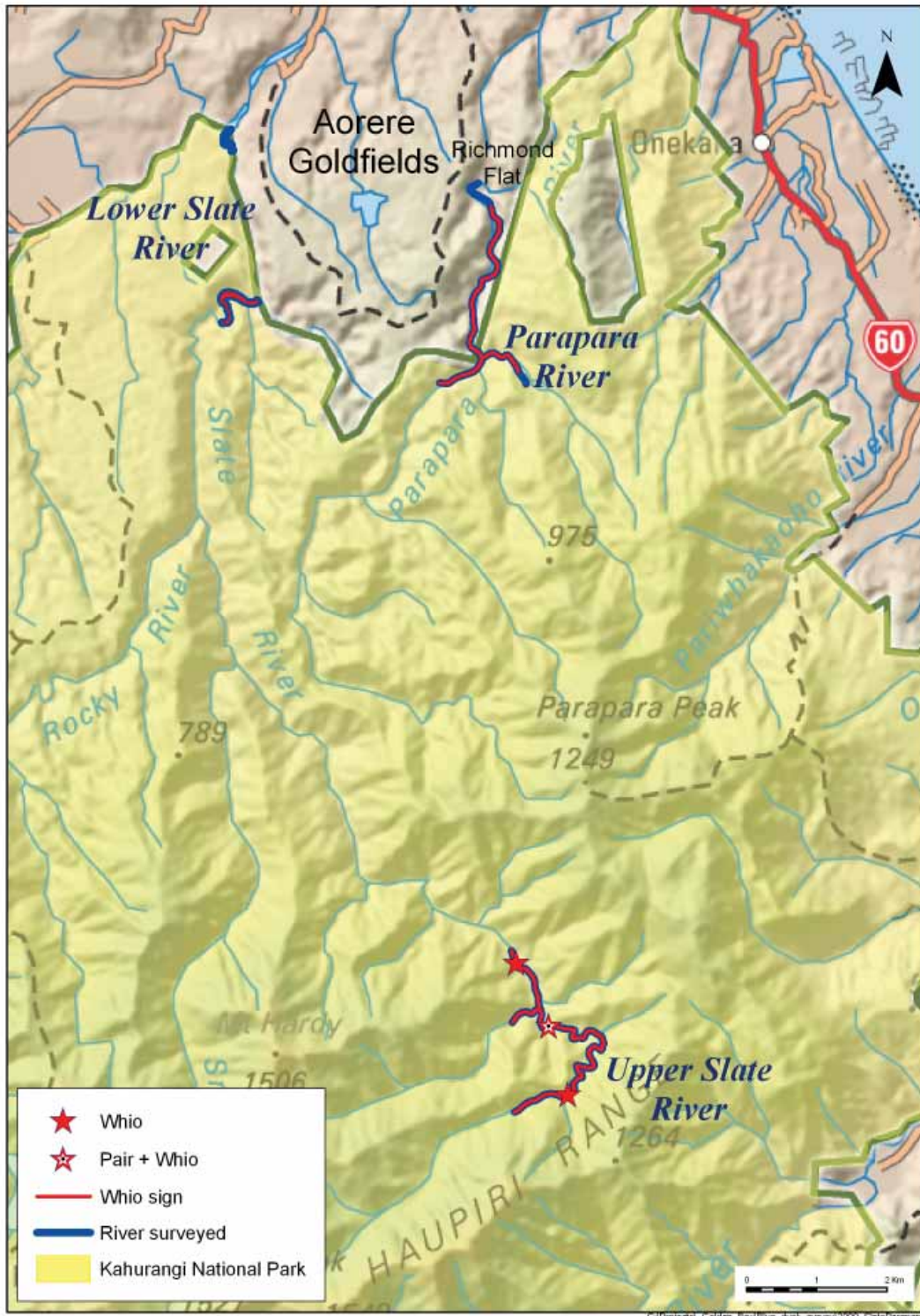
### 5.2.6 Cobb River (Figure 5.7)

#### *Cobb River (14 km)*

No who or sign was seen during the survey. However, two adults (1 pair) with four ducklings were seen 700 metres upstream of the reservoir by staff member Sarah Aylott on 23 January 2009.



**Figure 5.8: Slate and Parapara Rivers**  
 recorded during 2009 survey of Kahurangi National Park



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### 5.2.7 Slate and Parapara Rivers (Figure 5.8)

#### *Lower Slate River (1 km)*

Sign was present but no birds were seen.

#### *Upper Slate River (6.5 km)*

Sign was common on the upper Slate River. A single male that was thought to be moulting was seen at the beginning of the survey. At the first campsite a group of three birds were present consisting of at least one male and one female. A juvenile was seen at the upstream end of the survey.

**Total:** 4 adults, (1 pair, 2 singles) 1 juvenile

#### *Parapara River (3.5 km) and Happy Valley Stream (1 km)*

Sign was common from above the small gorge and into Happy Valley Stream. No birds were seen. The last reported sighting of whio in this area was 1988.

### 5.3 WHIO SIGN AS AN INDICATOR OF WHIO DISTRIBUTION

Good weather preceding most surveys and a new policy of recording every piece of sign gave a good record of the presence of whio in the rivers surveyed. Whio sign was found in five rivers where it had not been recorded in 1999 - the Parapara, Spey, Kaituna, lower Slate and Weka Creek. Conversely, Kahurangi and Corkscrew had sign in the previous survey but none this time.

## 6. Discussion

### 6.1 TIMING OF SURVEY

Ideally whio surveys need to coincide with the end of nesting so the maximum number of whio would be on the river with broods. Poor weather, however, stopped us even thinking about starting the survey in spring. A small section of the Kahurangi River was surveyed in early December, but the remainder of rivers were surveyed in summer from January 5 – 26 March. This coincides with the moult when birds are less conspicuous but also was a time of warm weather, which made surveying in rivers safer and more pleasant for surveyors.

Most surveys were done between 0600 and 1000 hrs and 1600 and 2000 hrs. As the season progressed and the days shortened these times were adjusted so that the first and last four hours of daylight were used. Occasionally it was necessary to survey outside these times in order to reach a campsite before dark, but in general crepuscular timing was kept and whio sign was still obvious.

### 6.2 DISTRIBUTION AND ABUNDANCE

This survey was a repeat of one done in 1999/2000 (Studholme, 2000) so as to make the two data sets comparable. Ten rivers were not surveyed i.e. Goulard Creek, Heaphy River, Kohaihai River, Oparara River, Nimrodel Creek, Galadriel Creek, Postal River, Devil River, Lindsay Creek and Celeborn Creek, and their totals are not included in the comparisons in this report. Longer sections of the Aorere and upper Anatoki were surveyed due to better weather, while other sections were reduced e.g. lower Anatoki.

There were less adult who seen this year, 52 compared with 54, but more rivers that they were seen in (19 compared with 16). Surveying during the moult would suggest a lower likelihood of detecting birds so the results of this survey are unlikely to indicate a significant change in the population. The number of ducklings was much lower due to the timing of the survey which was not aligned with the breeding season. Only one clutch of four ducklings was seen by a casual observer in the Cobb compared with 24 ducklings from six clutches in the last survey.

Two captive reared (WHIONE) birds, released at Goulard Downs in April 2007, were detected during this survey. The first was a male in the Webb River which is the first who report from here since 1980. He was with another male and they were acting as if they were a pair, with the wild male whistling frequently and the banded bird making regular 'cheeping' calls. A second bird from this release, a female Y-R, was found in a pair with a wild male in Big River, about 1 km from where she was released.

About one-third of adult who were seen alone. This is a similar proportion to the last survey. Little comparison can be made of brood numbers given the difference in seasonal timing.

### 6.3 USING WHIO SIGN AS AN INDICATOR OF WHIO PRESENCE AND ACTIVITY

Who were generally found in association with sign. An exception was the male "pair" found in the Anatori. Despite fine weather, no sign was detected until the birds were seen, perhaps due to the wider cobbley nature of the riverbed with few prominent rocks. In other areas intensive areas of sign was found, but no birds were seen. This occurred in the Spey River just below Taheke Stream and in the true right side creek between the Aorere and the Burgoo rivers. The Parapara River contained a lot of fresh sign and no who were seen. The mid reaches of the Anatoki River and the Stanley River had moderate amounts of sign, but again no who were seen. The Anatori River had not had a who report since 1980 so their presence there is significant.

### 6.4 CONCLUSIONS

There were about the same number of who detected in this survey (52) as the last (54).

## 6.5 RECOMMENDATIONS

The reinstatement of a national database was recommended in the last report, and this has been successful with creation of the DOC national database Bioweb. The data from this work has been entered into Bioweb and it is recommended that additions to this database continue.

The main recommendation of the previous report was that a detailed ecological study should take place that looks at mortality and recruitment, so that population health can be assessed and an appropriate management strategy be developed. This has taken place through the initiatives of the whio recovery group, and has led to Goulard Downs being designated as a recovery site – a second priority managed site (Van Klink, 2009). A management plan which satisfies the recovery groups' recommendations will eventually be part of this. The latest recovery plan is comprehensive and should be the first stop in any further whio management decisions including any plans to repeat this survey.

## 7. References

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- Studholme, B. 1999. Survey of the abundance of blue duck (whio) in Kahurangi National Park. Internal report No.30. Department of Conservation.
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- Williams, M.J. 1991a. Social and Demographic Characteristics of the Blue Duck *Hymenolaimus malacorhynchos*. *Wildfowl* 42: 65-86.

### DEPARTMENTAL FILE AND ELECTRONIC REFERENCES

DESCRIPTION	LOCATION
Grid references of entry and exit points, campsites, survey times and whio sign	DOCDM-567067
This report	DOCDM-435482
Paper copy of report	NHS 03 12 02
Copy of field notes	NHS 03 12 02

## 8. Acknowledgements

I am hugely grateful to my able assistant Fred Wingate. His bush savvy presence made the survey both safe and enjoyable. Mike Ogle (DOC Takaka) surveyed the Goulard Downs catchment, edited the report and provided support and encouragement. Thanks to Frankie Knowlson (DOC Takaka) who assisted on the upper Burgoo River, and Chris Golding and Ivan Rogers (DOC Motueka) assisted on the Clark River. Mik Symmonds (local resident) provided observations the lower Waingaro catchment enabling the survey to be completed in one season. Belinda Studholme and Daniel Jack trawled through their memories of the previous survey to provide me with valuable advice on river terrain. Pete Gaze provided firm but fair editing advice. Thank you also to Dave Harwood and Kea Simpson for access to their property.

# Appendix 1

## TIME, DATE AND LOCATION OF WHIO SIGHTINGS

TIME	DATE	RIVER	DESCRIPTION	EASTING	NORTHING	BIOWEB NO.	
1000	15/01/2009	BURGOO	pair of whio	2465773	6025967	588062	
	15/01/2009	AORERE	whio, adult unknown sex	2464755	6029009	588063	
900	16/01/2009	FLANAGANS	whio, male	2462508	6032395	588064	
945	16/01/2009	FLANAGANS	whio, male	2462218	6032234	588066	
1730	19/01/2009	ANATOKI	pair of whio	2475443	6029716	588067	
	20/01/2009	ANATOKI	whio, male	2476518	6027706	588068	
1040	20/01/2009	ANATOKI	whio, male	2473884	6027010	588069	
1715	20/01/2009	ANATOKI	pair of whio	2477586	6030264	588070	
	17/02/2009	UPPER BURGOO	whio, juvenile	2470079	6019959	588071	
	17/02/2009	UPPER BURGOO	pair of whio	2469449	6023677	588072	
	17/02/2009	UPPER BURGOO	whio, male	2468589	6024200	588073	
	18/02/2009	UPPER BURGOO	pair of whio	2469941	6023209	588074	
	18/02/2009	CLARK	pair of whio	2469599	6031463	588075	
	24/02/2009	UPPER SLATE	whio, adult unknown sex, moulting	2481494	6037887	588076	
	630	24/02/2009	UPPER SLATE	whio, 1 male, 1 female, 1 adult unknown sex	2481955	6036984	588077
		25/02/2009	UPPER SLATE	whio, juvenile	2482230	6036008	588078
		2/03/2009	WAINGARO	whio, 1 adult, 1 juvenile	2473087	6016883	588079
3/03/2009		WAINGARO	whio, female	2478136	6016594	588080	
3/03/2009		WAINGARO	pair of whio	2479048	6016623	588081	
4/03/2009		WAINGARO	whio, female	2481340	6017037	588082	
15/03/2009		ANATORI	whio, 2 males, 1 banded (Blue-W)	2455946	6048362	588083	
24/03/2009		SAXON	whio, 1 adult female, 1 adult unknown sex	2450623	6035814	588084	
900		24/03/2009	SAXON	whio, 1 juvenile female	2450542	6036601	588085
		26/03/2009	BIG RIVER	whio, 1 adult female (Y-R), 1 adult unknown sex	2455137	6035376	588089
850	26/03/2009	BIG RIVER	whio, 1 adult female (M-Blue O), 1 adult male	2455711	6035742	588090	
1100	26/03/2009	BIG RIVER	whio, 1 adult male, 1 adult unknown sex	2456126	6036947	588091	
1900	9/02/2009	CAVE BROOK	whio, adult unknown sex	2455645	6035557	588092	
710	10/02/2009	CAVE BROOK	whio, adult unknown sex	2455627	6034723	588093	