



SUMMARY OF HUMPBACK WHALE CALFS: 2010

This document contains a summary of calves encountered during the 2010 humpback whale season in Vava'u, Kingdom of Tonga. Images and text

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INTRODUCTION

This is the third consecutive summary of humpback whale calf encounters that we have produced. The calf encounters set out in this document took place during August and September 2010 in the Vava'u island group in the Kingdom of Tonga. Our summaries from 2008 and 2009 are available via these two links: [2008 Calf Summary](#), [2009 Calf Summary](#).

The purpose of this document is to provide a record and reference for ourselves for future whale seasons in Tonga, and also to share this information with anyone else who takes an interest in humpback whales. With three consecutive years of documentation, we are developing a baseline of calf-sighting data, which we hope will prove useful to the whale-watching and research communities.

During our stay in Tonga this year (29 July to 17 September), we identified 22 calves. Friends who were in Vava'u for a video project during our stay ID-ed another two calves, for a total of 24. We recorded an additional 16 sightings of calves we were unable to identify (There were initially 18, but we were able to ID two of those later.).

We will update this file as and when we are able to review and verify additional calf sightings contributed by third parties.

We would like to thank all of our friends (both those living in Tonga and our co-travellers), who helped us with finding and identifying these calves. It's a lot of work, and we relied on help from many people.

All of this work has been and is being done on our own time, with our own resources. We are not receiving financial or other assistance, and we are not affiliated with any person or organisation involved with cetaceans.

METHODOLOGY

1. We recorded GPS locations for all sightings of humpback whale calves upon initial visual and/ or radio confirmation. When GPS units were not available, we marked locations by hand on a map.
2. Where possible, we entered the water to photograph calves with their mothers and other associated whales if any.
3. When we were able to take photographs of sufficient quality and quantity to establish an ID, we named and assigned a numerical ID (year+ID# format) to the calf.
4. In those cases where we were unable to get sufficient photographs to establish ID, we did not name the calves. We recorded the sightings as unidentified calves and cross-checked any photos of such calves with subsequent ID-ed whales to look for possible matches.
5. We have uploaded all the GPS data to Google Maps, where the locations of all [ID-ed calves](#) and [unidentified calves](#) are available for viewing.
6. The photographs contained in this document represent a small portion of the images we collected. For most ID-ed calves, we have many more images for verification purposes.

OBSERVATIONS

- 1) During our stay this season, we identified 22 calves over 81 boat-days on the water (compared with 26 calf IDs over 59 boat days in 2009). This worked out to **0.27** calves/ boat-day (a boat-day being defined as a single day of approximately six hours on the water on a boat looking for whales). With the addition of two calf IDs contributed by friends ([Shawn](#), [John](#), Bob), our count by the time we left Tonga was 24 over 89 boat days, still representing a ratio of **0.27** calves/ boat-day.
- 2) We also recorded 18 calves for which we were unable to establish ID. We were later able to establish IDs for two of those 18, meaning that we ended up with 16 unidentified calves (compared with 24 in 2009).



Figure 1: ID-ed Calfs/ Boat-day*

** Boat-day = single day of approx. six hours on the water on a boat looking for whales*

- 3) Based on Figure 1 above, which sets out our calf-ID experience over the past four seasons, it seems that a sighting level of approximately 0.25 calves/ boat-day may represent the norm, with 2009 being an outlier.
- 4) Figure 2 below depicts the total Sighting Ratio for 2009 and 2010, where we have defined Sighting Ratio as = (Total ID-ed calf count + Total unidentified calf count)/ Total boat-days. This ratio was **0.85** for 2009 and **0.47** for 2010, a significant difference. As we did not keep track of unidentified calf sightings prior to 2009, we are unable to calculate this figure for previous years. Figure 2 seems to support the notion that 2009 was an exceptional year.

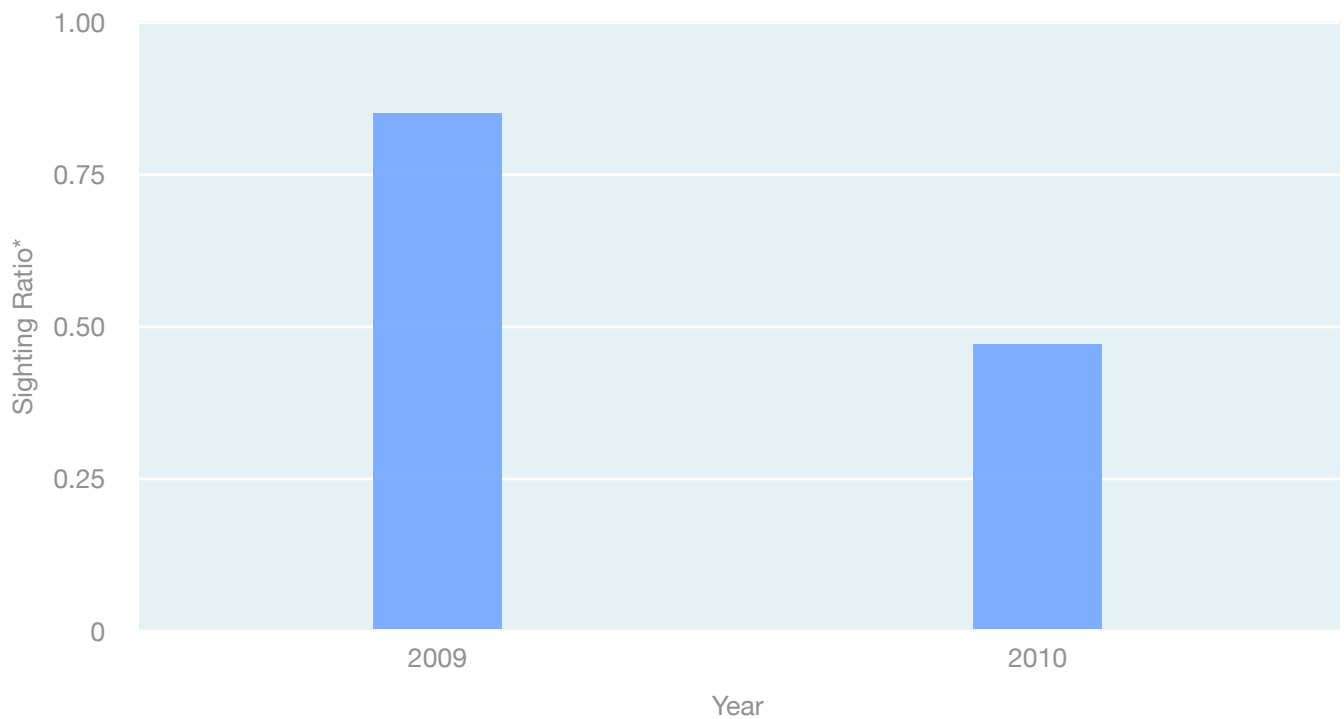


Figure 2: Calf Sighting Ratio*

** Sighting Ratio = (Total ID-ed calf count + Total unidentified calf count)/ Total boat-days*

- 5) Subjectively, the humpback whales generally seemed more skittish and “unsettled” in the 2010 season than we have experienced in the past. As a consequence, getting photographs to establish ID was challenging.
- 6) As with 2009, we recorded our sightings with GPS, and uploaded our GPS data to Google Maps (click to see sighting locations of [ID-ed calfs](#) and [unidentified calfs](#)). We used Garmin GPS 60 handheld units for marking GPS locations and converted to Google KML format using GPSBabel.
- 7) We again found calfs throughout the entire topography of the Vava’u Island group without apparent clustering or preference for a specific area. Within this context however, there were a couple of notable geographically-linked patterns. First, while we had frequent sightings of mother/ calf pairs in the North Bay area in 2009, we saw none during the 2010 season, despite searching that area on a regular basis. Subjectively, a relative dearth of calf sightings in North Bay is more consistent with our previous experience. Second, we also seemed to have relatively more encounters in the area south of Euakafa this season than we did in 2009.

- 8) Although we observed, as we have in the past, that many of the mother and calf pairs we encountered appeared to be travelling (heading south, heading north, coming in from the west, etc.) and thus perhaps using Vava'u as a transit area, we recorded the greatest number of repeat sightings that we've experienced to date for a single mother/ calf pair. We had in-water encounters with the female calf 201005 Ikumi on 10 occasions over the 15 days from 17 to 31 August. We also recorded three encounters with 201008 Lele spanning the 11 days from 22 August to 01 September.
- 9) We continue to believe that most mother/ calf pairs visit the Vava'u group for only a short duration, but we now have a handful of examples of extended stays and/ or repeat visits:
- 200904 Stitches (4 encounters/ 23 days);
 - 200912 Luna (3 encounters/ 13 days);
 - 201005 Ikumi (10 encounters/ 15 days); and
 - 201008 Lele (3 encounters/ 11 days).
- 10) Due in large part to the unsettled mood of the whales in the 2010 season, ascertaining the sex of calves proved more difficult than in the past. We didn't have as much quality time with each calf to see/ photograph each baby whale's underside. Of the calves on our ID list in Table 1, we were able to identify 5 as female and 4 as male (compared to 10 female and 8 male in 2009). The sex ratio was 7 female and 4 male after including calves ID-ed by other people (compared to 14 and 9 in 2009). Once again, there appeared to be relatively more females than males among the juvenile whales for which we were able to establish sex.
- 11) We did not document any repeat mothers as we did between the 2008 and 2009 seasons.
- 12) There was a general preponderance of "black" whales this season. Many of the mothers, for example, had little to no white colouration on the side of their bodies, making it comparatively difficult to spot them in the water and subsequently ID them. This is the first season that we've noticed a relative abundance of predominantly black whales. We're not certain what, if any, significance this has, but it is certainly something that we'll keep an eye on in the future. (**Note:** *It's easy to see the relative abundance of black whales by comparing the whales in this file with those in the [2009 Calf Summary](#).*)

- 13) Figure 3 below illustrates our cumulative calf counts over the past three seasons (incorporating all ID-ed juvenile whales each season, including those contributed by third parties). While we recognise that there are inherent differences in each season (different periods of stay, varying number of boat days, weather variations, etc.), the slope of the line representing cumulative calf count appears similar and consistent for each season.
- 14) The color-coded circles in Figure 3 represent full moon dates. We again did not notice any particular correlation with the phase of the moon; the slope of the cumulative calf count lines appear consistent without regard for the timing of the full moon. Over the past several seasons, we have been unable to establish any correlation between moon phase and appearance of humpback whale calves in the Vava'u area.

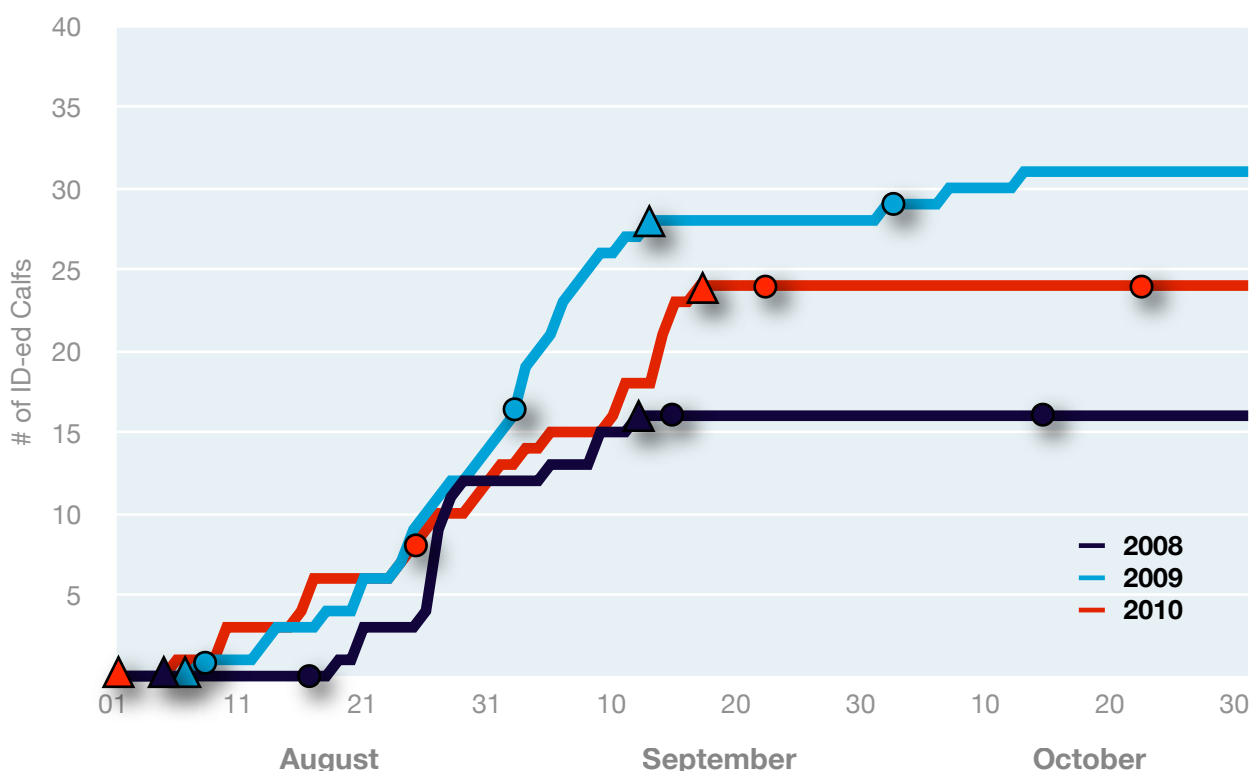


Figure 3: Cumulative ID-ed Calf Count

Circles = full moon

Triangles = date of arrival to/ departure from Tonga

- 15) If you're interested in reading more about the 2010 humpback whale season, click the following links to see reports posted in August and September: [Part 1](#), [Part 2](#), [Part 3](#), [Part 4](#), [Part 5](#), [Part 6](#), [Part 7](#), [Part 8](#).
- 16) To wrap up, putting this document together takes a lot(!!!) of work. If you have the skills (document layout, graphic design, proofreading), time and desire to help write and improve the 2011 summary, [please let me know](#).

**TABLE 1: HUMPBACK WHALE CALF IDENTIFICATIONS
VAVA'U, KINGDOM OF TONGA (AUG-SEP 2010)**

([Click here to see map of sightings](#))

#	NAME		DATES/ LOCATIONS SIGHTED
1	Ongo		06 Aug, inner area, between Fonualei and Vakaeitu
2	Bimyo	♂	10 Aug, AM east of Eueiki, PM near Lape
3	Mali Mali		10 Aug, near the tip of Vakaeitu
4	Saipe		16 Aug, far, far south of the islands
5	Ikumi	♀	17, 20, 23, 24, 25, 26, 27, 28, 29, 31 Aug; see map for locations.
6	Lahi	♂	17 Aug, outside Hunga anchorage; 18 Aug, near Tauta
7	Geri	♂	24 Aug, outside main channel entrance
8	Lele		22 Aug and 01 Sep, south of Euakafa; 25 Aug, near Tungasika
9	Yoshi		26 Aug, south of Ovaka
10	Kurosuke	♂	26 Aug, bottom of Hunga channel
11	Toku		30 Aug, Toku Island
12	Secorra	♀	01 Sep, outside north Hunga (Shawn , John and Bob)
13	Manninita		03 Sep, near Manninita and Taula
14	Blacktail		31 Aug, far east; 03 Sep, south near Taula
15	Anabella	♀	03 Sep, outside north Hunga (Shawn , John and Bob)
16	Heart	♀	02 Sep, near Vakaeitu
17	Ninja		11 Sep, south of Ovaka
18	Kowai		11 Sep, south of Ovaka
19	Poto	♀	14 Sep, north of Mounu; 16 Sep and 17 Sep, channel between Hunga and Nuapapu
20	Pongipongi	♀	14 Sep, near Swallows Cave; 15 Sep, main channel

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VAVA'U, KINGDOM OF TONGA (AUG-SEP 2010)**

([Click here to see map of sightings](#))

#	NAME		DATES/ LOCATIONS SIGHTED
21	Puna		14 Sep, bottom end of main channel, heading out to sea
22	Hope		15 Sep, south end of main channel, in the Vakaeitu/ Ovaka vicinity
23	Blue		15 Sep, outside Foelifuka
24	Kiri	♀	17 Sep, south side of Ovaka

FIGURE 4: HUMPBACK WHALE CALF IDENTIFICATIONS VAVA'U, KINGDOM OF TONGA (AUG-SEP 2010)

([Click here to see map of sightings](#))

	06 Aug: Ongo	Black = Tony/ Takaji/ Emiko Blue = Shawn/ John/ Bob
10 Aug: New Moon	10 Aug: Bimyo, Mali Mali	
	16 Aug: Saipe	
	17 Aug: Ikumi, Lahi	
	18 Aug: Lahi	
	20 Aug: Ikumi	
25 Aug: Full Moon	23 Aug: Ikumi	
	24 Aug: Ikumi, Geri	
	25 Aug: Ikumi, Lele	
	26 Aug: Ikumi, Yoshi	
	27 Aug: Ikumi, Kurosuke	
	28 Aug: Ikumi	
	29 Aug: Ikumi	
	30 Aug: Toku	
	31 Aug: Ikumi, Blacktail	
	01 Sep: Lele, Secorra	
	03 Sep: Manninita, Blacktail	
	05 Sep: Anabella	
08 Sep: New Moon	10 Sep: Heart	
	11 Sep: Ninja, Kowai	
	14 Sep: Poto, Pongipongi, Puna	
	15 Sep: Hope, Blue, Pongipongi	
	16 Sep: Poto	
	17 Sep: Poto, Kiri	

**TABLE 2: UNIDENTIFIED HUMPBACK WHALE CALFS
VAVA'U, KINGDOM OF TONGA (AUG-SEP 2010)**

([Click here to see map of sightings](#))

#	DATES/ LOCATIONS SIGHTED
1	04 Aug, main channel
2	11 Aug, southwest of Euakafa
3	13 Aug, near Eueiki
4	18 Aug, outside Hunga; 19 Aug, near entrance of North Bay
5	19 Aug, just off Kapa
6	20 Aug, far east, past Tapanā, south of Ofu
7	20 Aug, southeast of Fua'amotu
8	ID-ed as 201008 Lele
9	29 Aug, out to open ocean from White Patch
10	30 Aug, outside Hunga
11	31 Aug, southwest of Euakafa
12	ID-ed as 201014 Blacktail
13	02 Sep, outside Hunga
14	04 Sep, southwest of Ovaka
15	07 Sep, outside Hunga
16	07 Sep, south of Euakafa
17	08 Sep, inside the islands, near Oto and Ava
18	10 Sep, south end of main channel

FIGURE 5: UNIDENTIFIED HUMPBACK WHALE CALFS VAVA'U, KINGDOM OF TONGA (AUG-SEP 2010)

([Click here to see map of sightings](#))

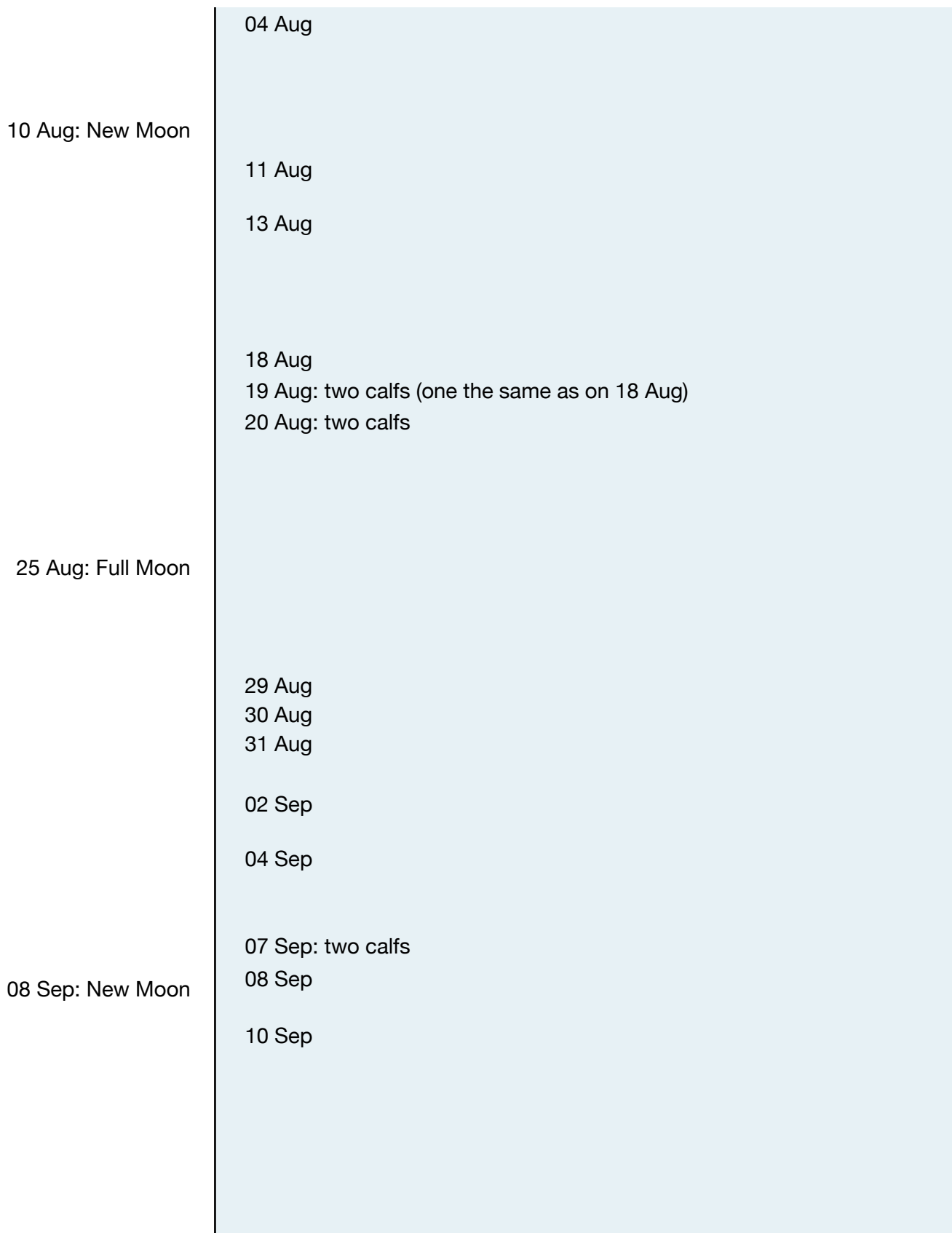


FIGURE 6: ALL HUMPBACK WHALE CALF SIGHTINGS VAVA'U, KINGDOM OF TONGA (AUG-SEP 2010)

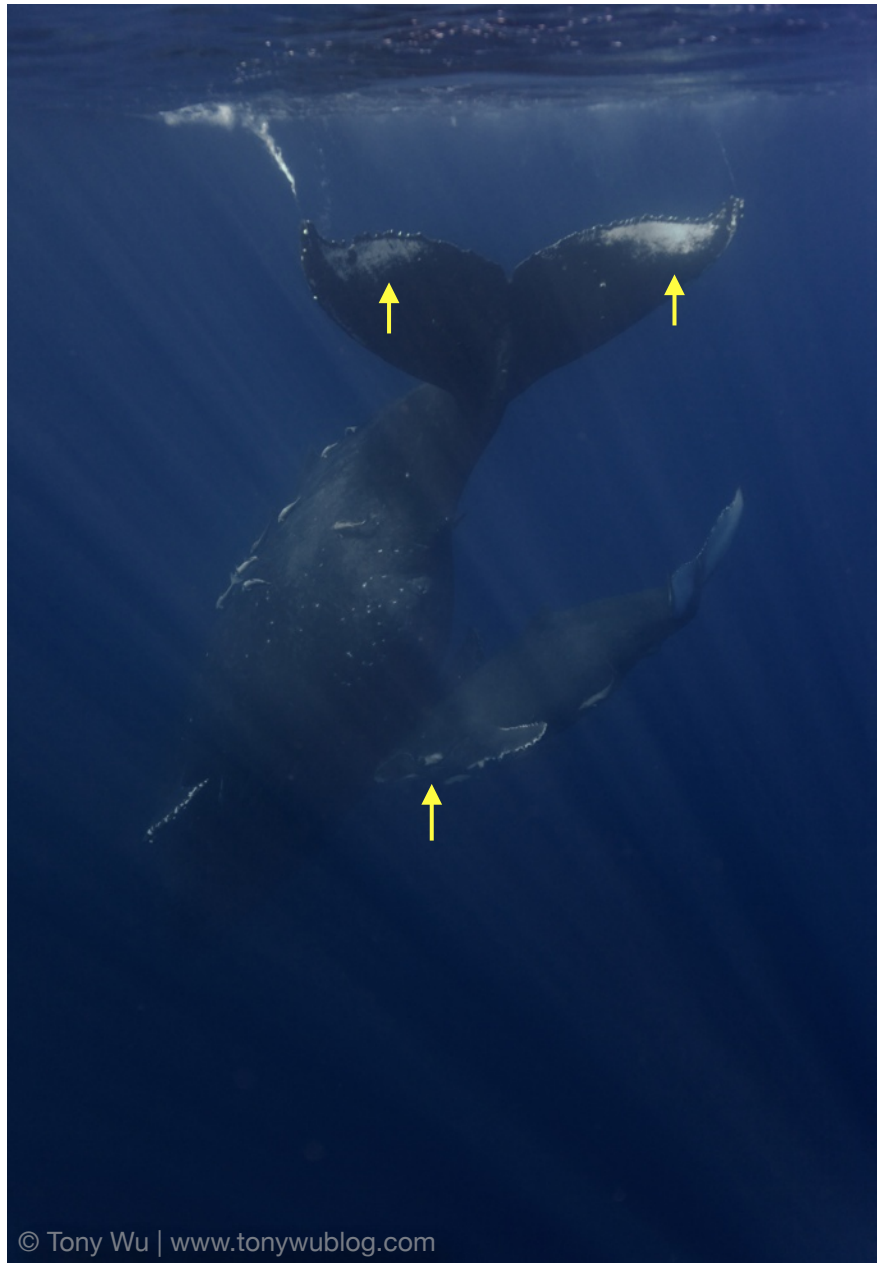
	04 Aug: calf	Black = Tony/ Takaji/ Emiko
	06 Aug: Ongo	Blue = Shawn/ John/ Bob
	07 Aug: Did not go out on the water	Orange = Unidentified Calfs
	08 Aug: Did not go out on the water	
	09 Aug: Did not go out on the water	
10 Aug: New Moon	10 Aug: Bimyo, Mali Mali	
	11 Aug: calf	
	13 Aug: calf	
	16 Aug: Saipe	
	17 Aug: Ikumi, Lahi	
	18 Aug: Lahi, calf	
	19 Aug: Two calfs (one the same as on 18 Aug)	
	20 Aug: Ikumi	
	21 Aug: Did not go out on the water	
	24 Aug: Ikumi, Geri	
25 Aug: Full Moon	25 Aug: Ikumi, Lele	
	26 Aug: Ikumi, Yoshi	
	27 Aug: Ikumi, Kurosuke	
	28 Aug: Ikumi	
	29 Aug: Ikumi, calf	
	30 Aug: Toku, calf	
	31 Aug: Ikumi, Blacktail, calf	
	01 Sep: Lele, Secorra	
	02 Sep: calf	
	03 Sep: Manninita, Blacktail	
	04 Sep: calf	
	05 Sep: Anabella	
	06 Sep: Did not go out on the water	
	07 Sep: Two calfs	
08 Sep: New Moon	08 Sep: calf	
	10 Sep: Heart, Calf	
	11 Sep: Ninja, Kowai	
	14 Sep: Poto, Pongipongi, Puna	
	15 Sep: Hope, Blue, Pongipongi	
	16 Sep: Poto	
	17 Sep: Poto, Kiri	

1. ONGO

We named the first calf this season for our friend and mentor Ongo, who passed away in 2009. Mom/calf both very black.

When & Where: 06

Aug, inner area,
between Fonualei and
Vakaeitu



2. BIMYO ♂

“Bimyo” in Japanese translates to something like “iffy” or “uncertain”.

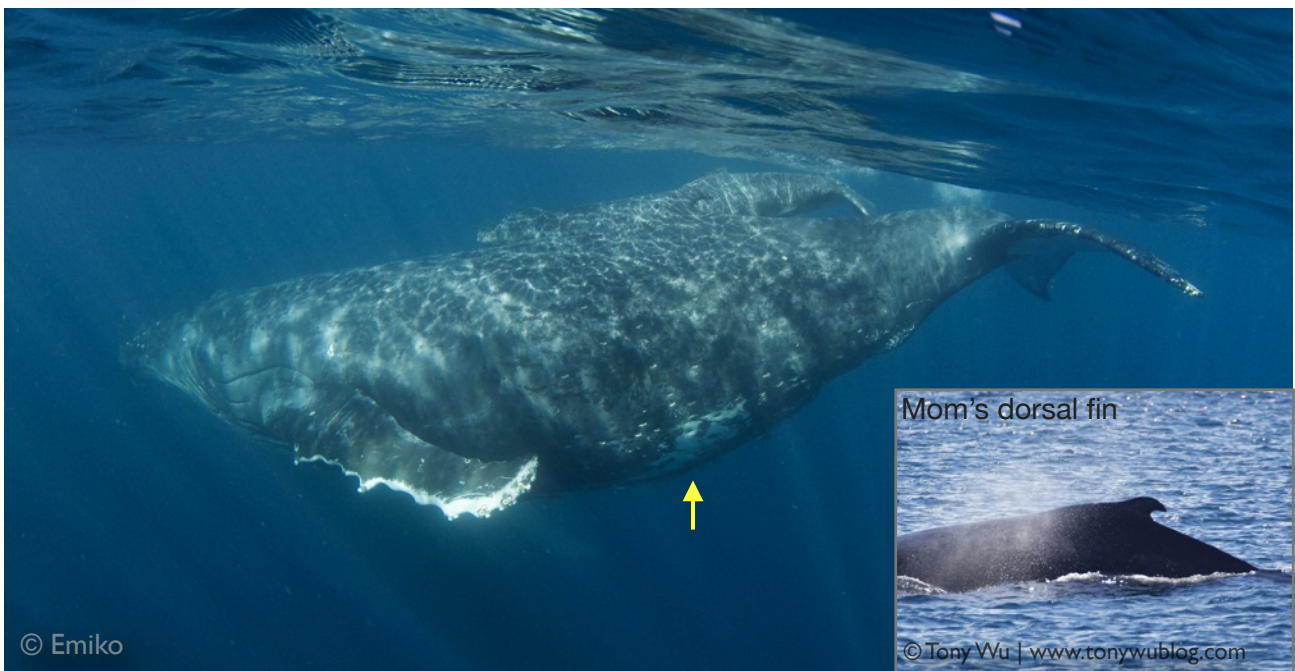
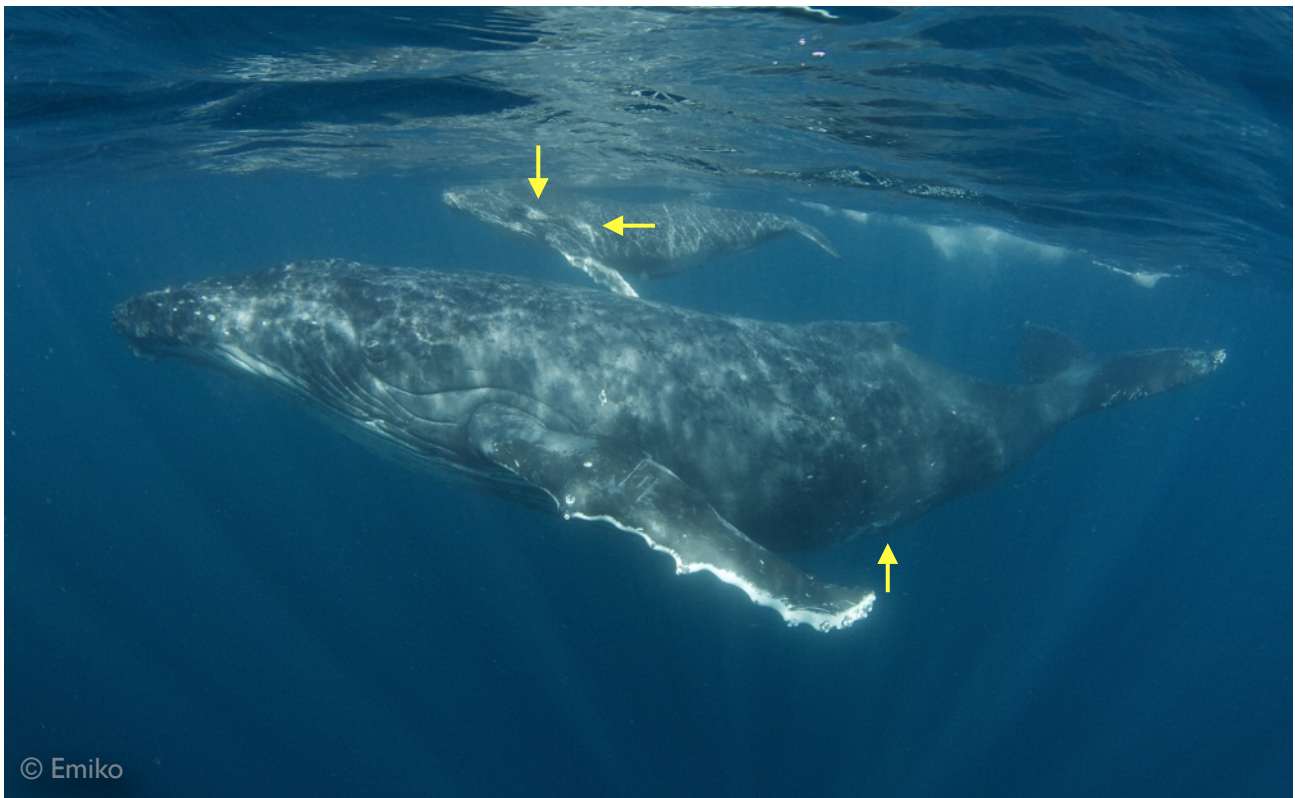
We saw this calf twice on one day, once acting as if the adult whale with a lot of white on its body was its mom, the next time swimming together with the dark whale as if that whale were its mom.

Dark whale was very, very aggressive on first encounter, but extremely laid back on second encounter. Difficult to figure out what was going on.

When & Where: 10

Aug, first encounter early morning east of Eueiki. Second encounter late afternoon near Lape.



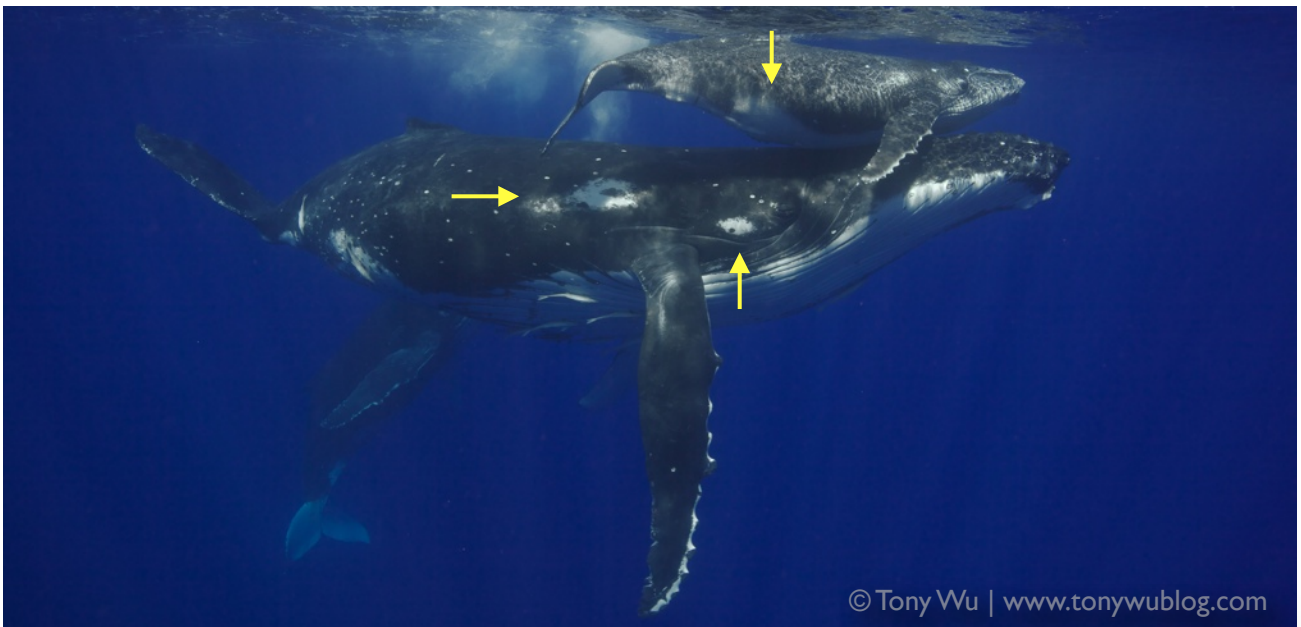


3. MALI MALI

Extended encounter, but poor visibility and difficult to approach. Mom had a very pronounced hooked dorsal fin.

“Mali Mali” means “smile” in Tongan.

When & Where: 10 Aug, near the tip of Vakaeitu.

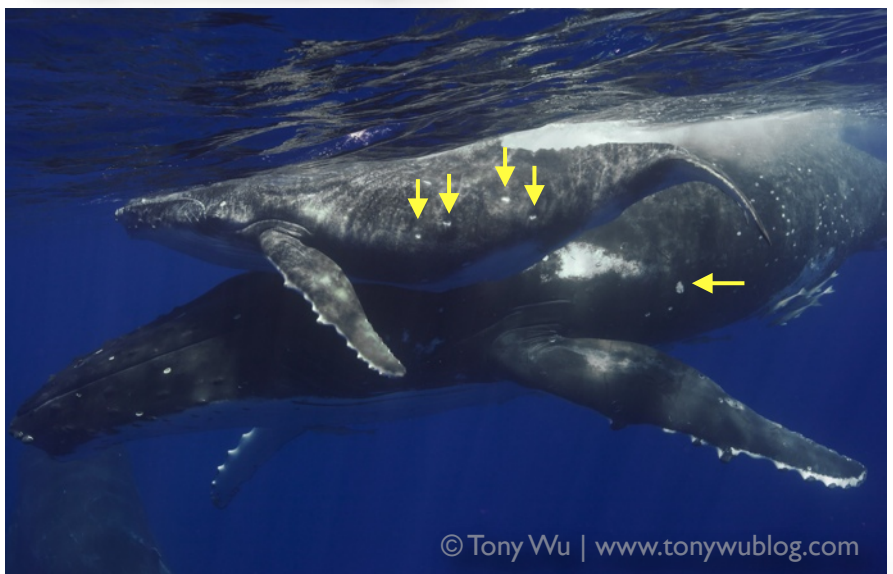


4. SAIPE

“Saipe” roughly means “all good” in Tongan. Named the calf Saipe because we had not an in-water encounter with a calf for six days. It was a relief to find this calf.

Mom, calf, escort were all relaxed, but when another whale appeared nearby, the escort snorted and grunted, and the trio took off.

When & Where: 16 Aug, far, far south.



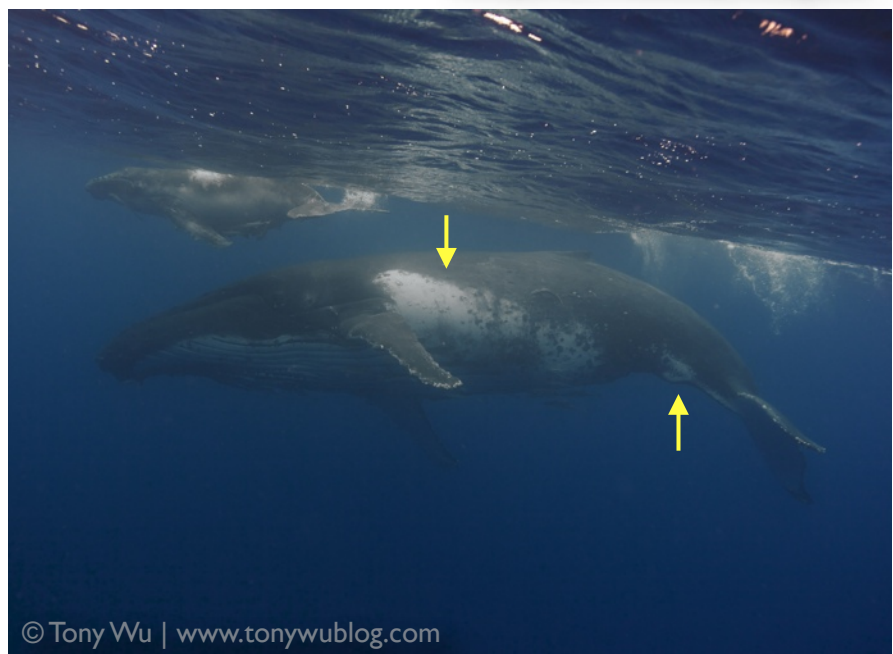


5. IKUMI ♀

Ikumi was the unqualified star of the season. We encountered her 10x between 17 Aug and 31 Aug. Other boats had frequent encounters as well. Over time, mom became very comfortable with people, and Ikumi played a lot, on some occasions staying at the surface without returning to mom down below.

Photos: [Here](#), [Here](#)

When & Where: 17, 20, 23, 24, 25, 26, 27, 28, 29, 31 Aug; see [map](#).

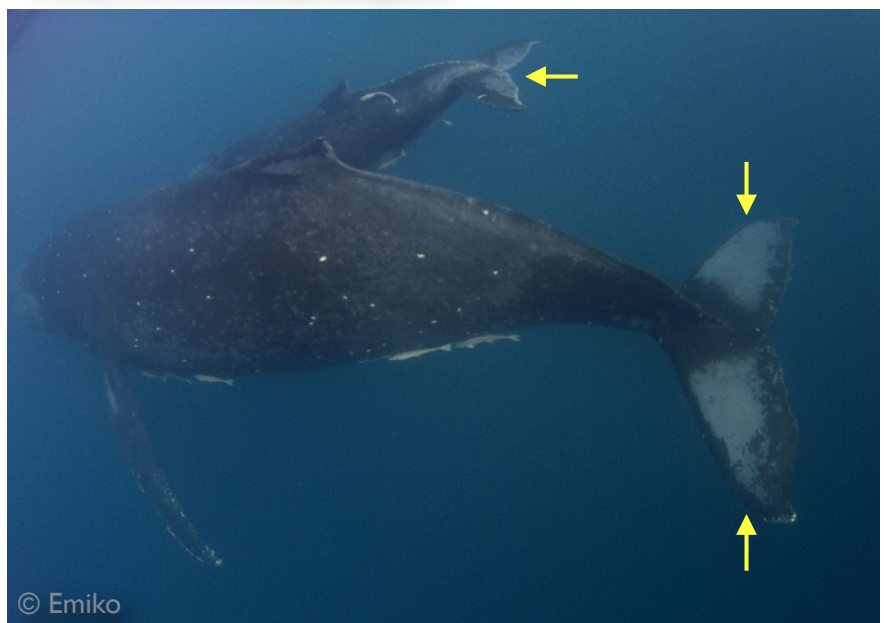
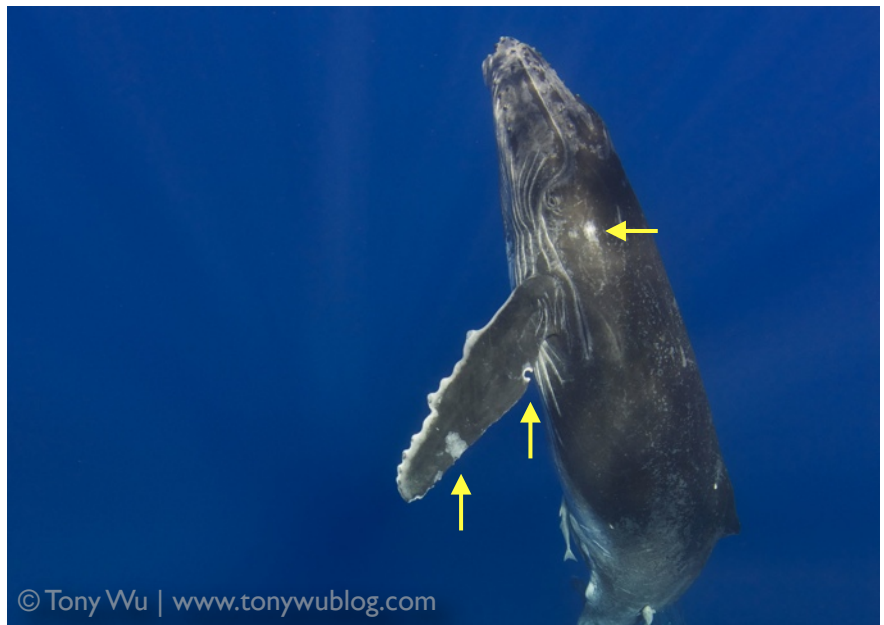


6. LAHI ♂

“Lahi” means “many” in Tongan. We chose this name because we were hoping for many more calf encounters. Mother had a truncated dorsal fin. Dorsal surface of mother’s and calf’s flukes had slight discolouration. Mother had white on ventral area, but overall quite dark.

Escort present both encounters. On 18 Aug, escort vocalised while swimming.

When & Where: 17 Aug, outside Hunga anchorage; 18 Aug, near Tauta island.



Mom’s dorsal fin



Calf’s dorsal fin





7. GERI ♂

Located early in the morning, outside main channel entrance. Named for [Geri Murphy](#), who was on the previous trip. Calf very young, mother easy to recognise. It took a long time to settle this pair, but once they grew accustomed to our presence, both mom and calf were very relaxed. Originally thought calf was a female, but upon closer inspection, it looks to be male.

When & Where: 24 Aug, outside main channel entrance.





8. LELE

Lele was a tough one to ID. First encounter brief, in poor viz. Initially marked as Unknown 08. ID-ed after 2nd encounter, from mom's dorsal and pectorals.

During 2nd encounter, mom and calf abruptly took off when pod of pilot whales showed up, accompanied by oceanic white tip sharks and marlin. "Lele" means "to run" in Tongan.

When & Where: 22

Aug and 01 Sep,
south of Euakafa;
25 Aug, near
Tungasika.





9. YOSHI

First spotted south of Ovaka. Near Lua, three males joined the mother and calf, creating a mini-heat run situation.

The whales moved constantly, going near Fua'amotu and then south.

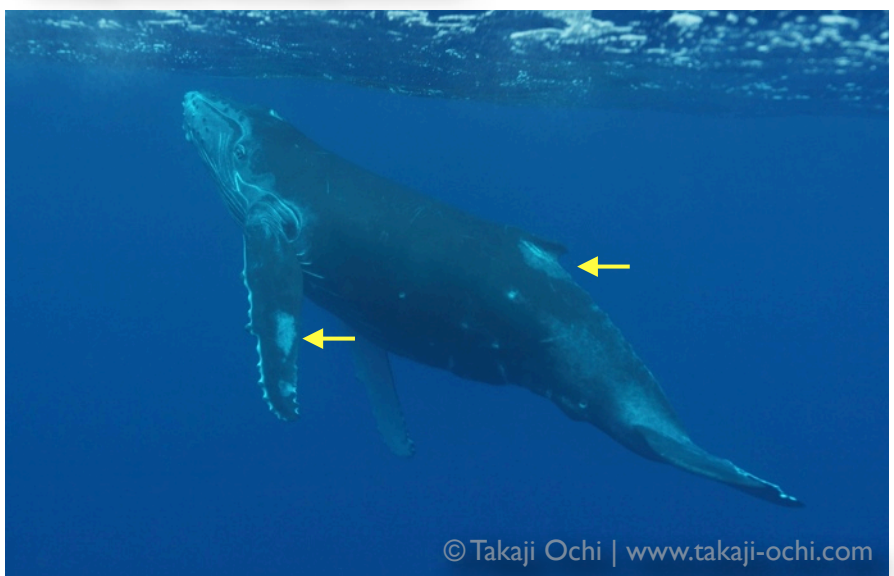
When & Where: 26 Aug, south of Ovaka.



10. KUROSUKE ♂

Mom and calf both mostly black. Mom was cautious. Mom has a pretty fluke and unusual white markings on both sides of the dorsal fin (reminiscent of markings on 200913 Luna's mother's dorsal fin).

When & Where: 27 Aug, outside Hunga, near Blue Lagoon area.





11. TOKU

Only one brief encounter with mom, baby and escort, after swimming all day with three socialising adult males.

Mom has a white dot on trailing edge of dorsal fin, as well as white border on top of dorsal (similar to 200805 Blade's mother).

When & Where: 30 Aug, Toku Island.

12. SECORRA ♀

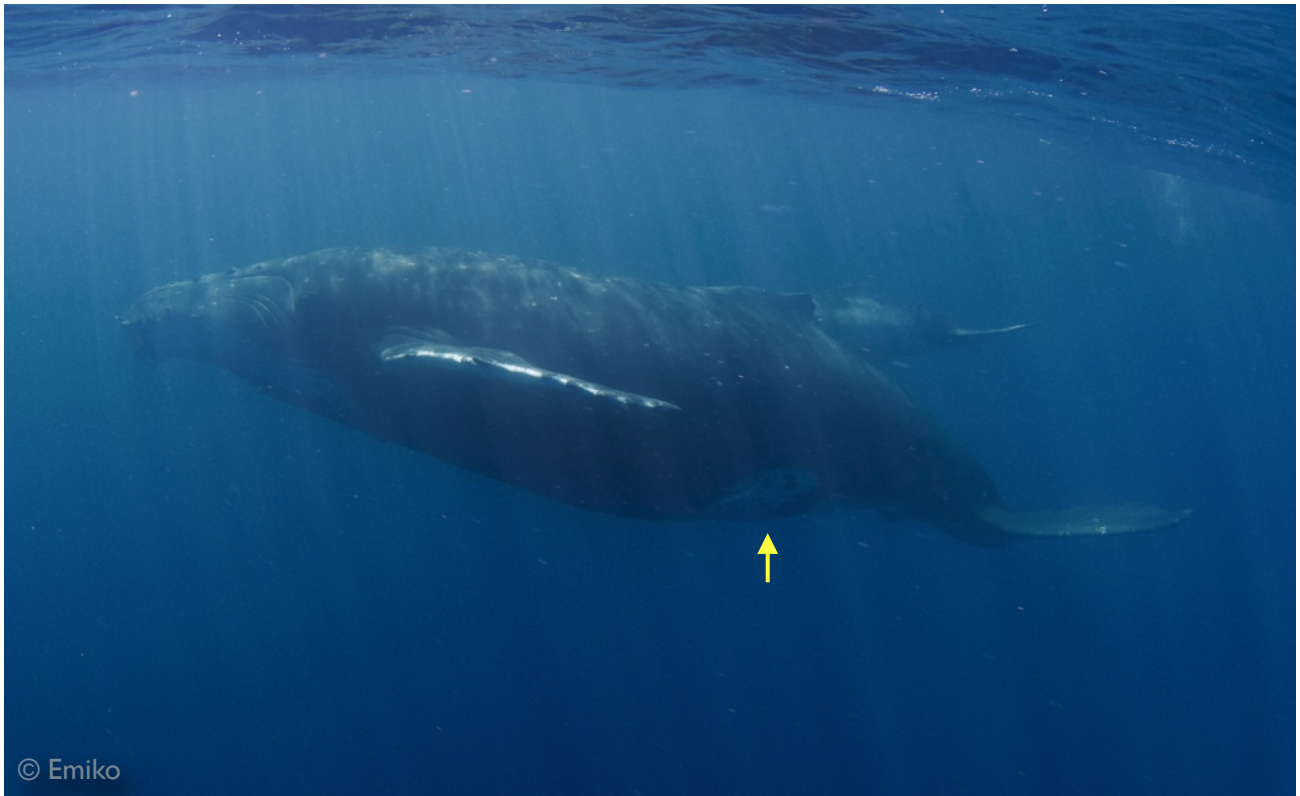
Our friends [Shawn Heinrichs](#), [John Weller](#) and Bob McNerney were in Tonga for a video project, and helped us to ID two baby whales.

Secorra was the first juvenile whale they encountered, on their first day on the water.

Mom has recognisable white body patterns and a blocky leading edge of her dorsal fin.

When & Where: 01 Sep, outside north Hunga.





13. MANNINITA

Only a few photos in poor visibility. Travelling at high speed. Mother easy to recognise from unique dorsal fin and limited white patches on lower torso, forward of caudal areas.

Named calf for location of sighting, relatively near Manninita island. Baby liked to breach.

When & Where: 03 Sep, near Manninita and Taula.

14. BLACKTAIL

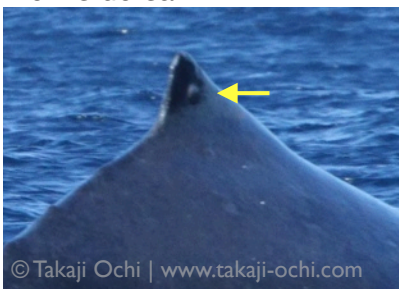
First encountered on 31 Aug, labeled as Unknown 12. Found far east, near the foul grounds.

Mom and baby both mostly black. Mom's fluke mostly black even on ventral surface. Mom has a bump on the right side of her dorsal. Calf has easily recognisable white area on pectoral fins.

When & Where: 31 Aug, far east; 03 Sep, south near Tauala.



Mom's dorsal fin



Mom's fluke



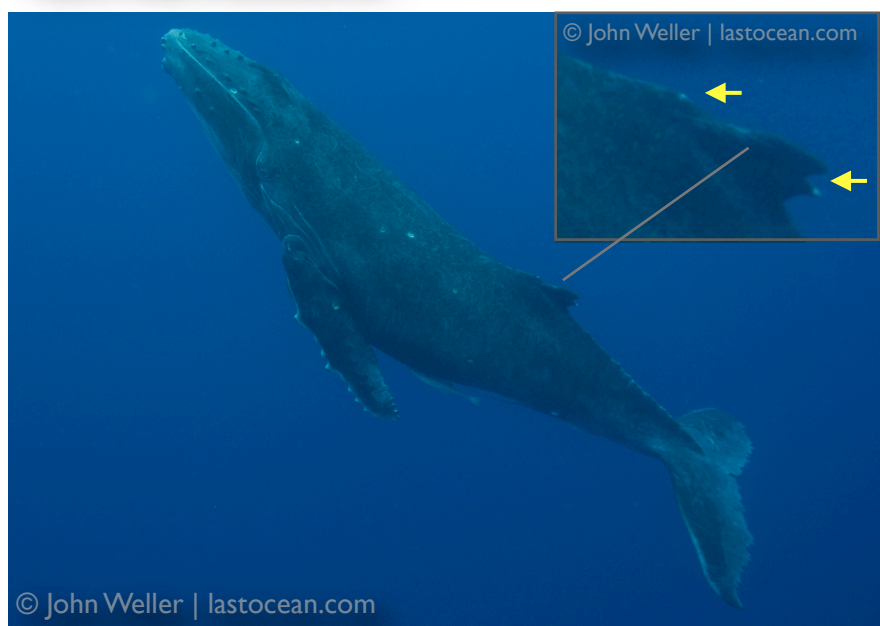
15. ANABELLA ♀

Second calf ID-ed by [Shawn, John](#) and Bob (ID-ed 201012 Secorra as well).

Mother was very comfortable, came up with the baby and pushed baby to swimmers. Baby seemed more shy than mother.

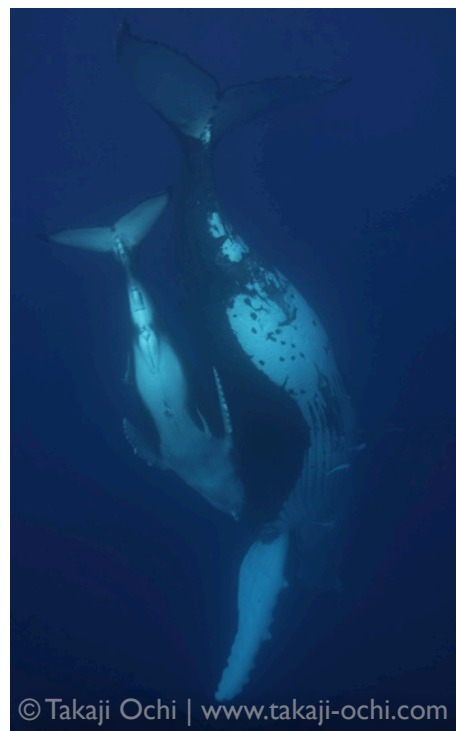
Both mom and baby mostly black, and have split dorsal fins (a characteristic several other whales had this season).

When & Where: 05 Sep, outside north Hunga.





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16. HEART ♀

Mom/ calf/ two escorts, originally spotted near Vakaeitu, Moved a lot, and finally settled in the channel between Blue Lagoon and Luamoko. One escort was driven away in the process. The

escort began singing late in the afternoon. Named the calf "Heart" for heart-shaped pattern on fluke. Both mom and baby have white-tipped pectoral fins.

When & Where: 10 Sep, Vakaeitu vicinity.



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17. NINJA

This mother and calf appeared out of nowhere, directly in front of us, while we were following another pair of whales.

We slipped in quickly and quietly to take a look, but the pair disappeared immediately into murky water.

We waited and waited, but never saw them surface. Conditions were relatively calm, and there were several other boats in the immediate vicinity, but no one spotted this pair again.

They literally disappeared without a trace, hence the name “Ninja”.

When & Where: 11 Sep,
south of Ovaka.



18. KOWAI

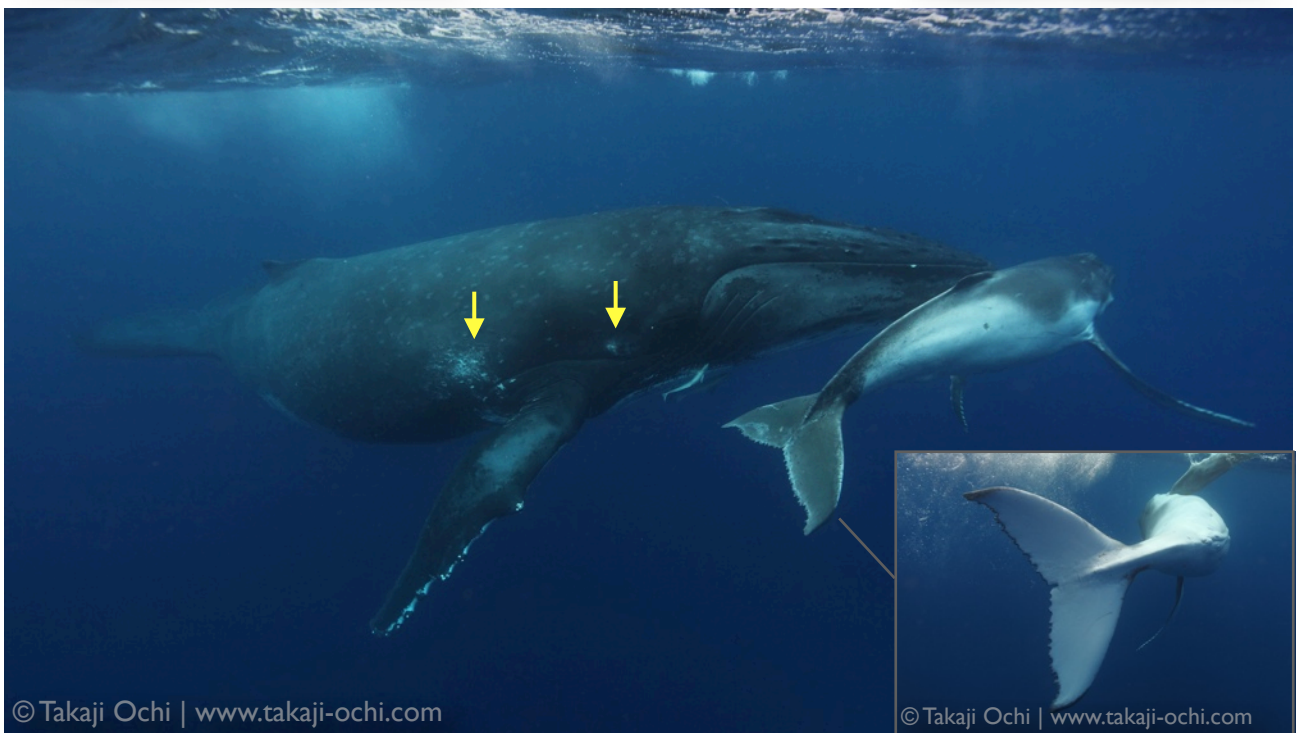
Kowai means "scary" in Japanese. We named the baby Kowai because of one of the four escorts was scary. It swam after Takaji and me in the water several times, with a whacked-out look in its eyes. ([Story here.](#))

We believe that particular whale was one of the two in the pair we were following before we saw 201017 Ninja.

This mom/ calf originally had two escorts, which were not crazy. The pair joined, and it became a full-blown heat run with mom and baby running as fast as they could to get away.

When & Where: 11 Sep, south of Ovaka.





19. POTO ♀

Mother very relaxed. Calf playful. Calf had a tendency to swim far away from the mother, and the mother would go looking for the baby.

Mother rested at shallow depth, at 5-6 metres. Calf

was so comfortable that it followed swimmers back to the boat. Other boats had similar experiences with this mom/ calf.

Photo: [Here](#)

When & Where: 14 Sep, north of Mounu; 16 Sep and 17 Sep, channel between Hunga and Nuapapu.



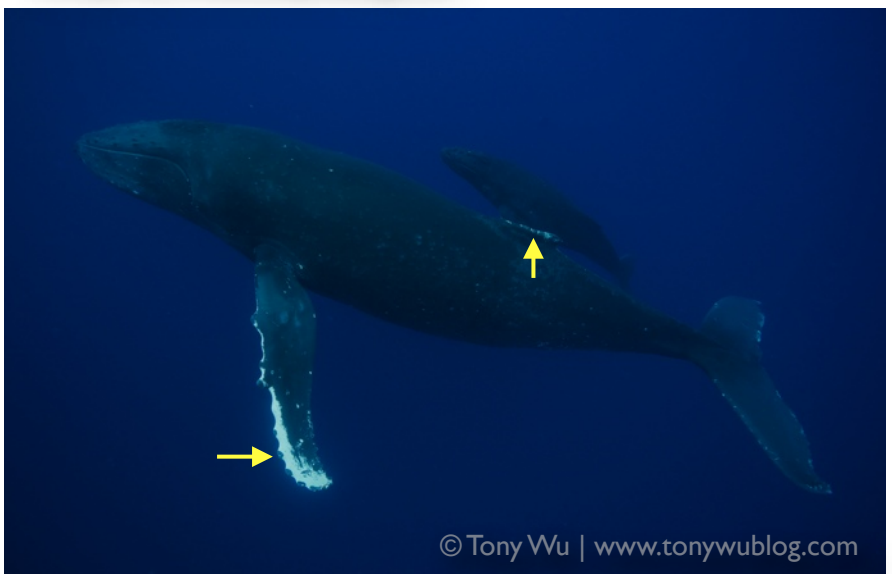
20. PONGIPONGI ♀

Mother was very calm, resting for long periods at a time. Baby was curious and playful. Easy to recognise mother by white marks on dorsal fin, white area on pectoral fin, and black on ventral side of fluke.

Initially sighted inside no-swim area. Mom and calf gradually moved out to main channel.

“Pongipongi” means “morning” in Tongan.

When & Where: 14 Sep, near Swallows Cave; 15 Sep, main channel.





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21. PUNA

Mother, calf, escort, moving constantly, headed into rough water in bad weather. Mother is largely black, with many scratch-like patterns, making her easy to recognise. Also has white on leading edge of dorsal fin.

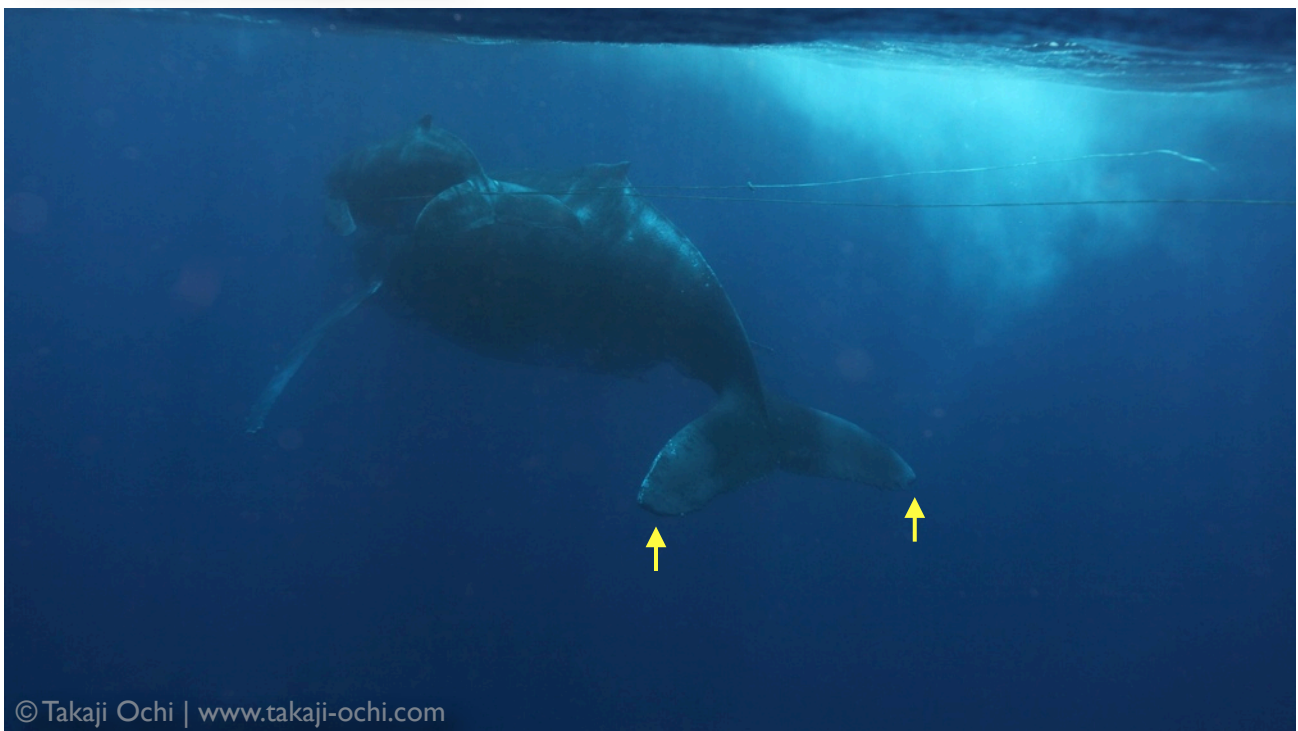
The baby breached higher than any baby breach I've ever seen, at least three metres into the air (hence the name Puna, which means "to jump" in Tongan). Escort was almost completely black, including ventral side of fluke.

Escort breached quite a few times as well. Escort tail slapped and baby breached simultaneously several times in a row.

When & Where: 14 Sep, bottom end of main channel, heading out to sea.



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22. HOPE

Baby entangled with thick rope. Rope seems to be entangled on some part of the calf's face, though not completely certain.

Nearly impossible to approach. Takaji was only able to get photos from behind on one drop alone. Named "Hope" for "Hope that the rope falls away"

When & Where: 15 Sep, south end of main channel, in the Vakaeitu/ Ovaka vicinity.

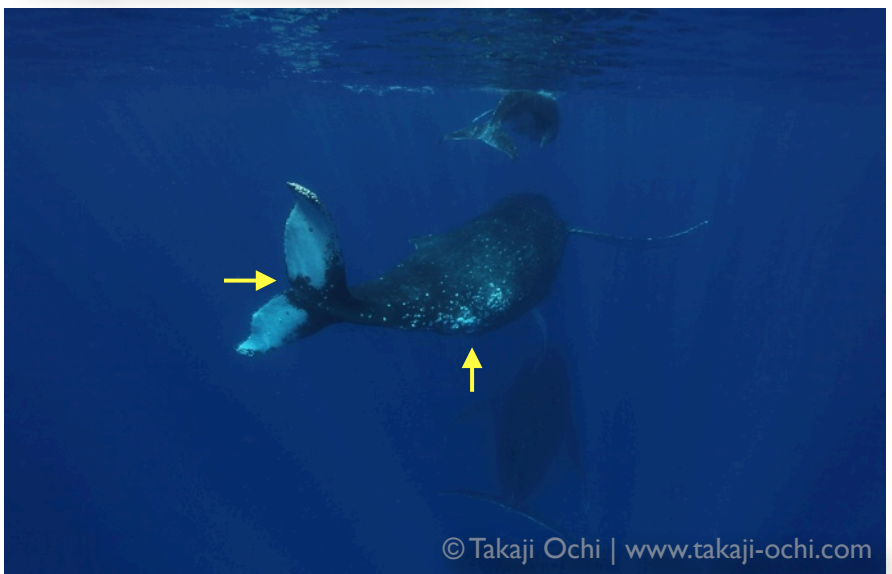


23. BLUE

Escort was with mom/ baby the entire time. Mom was very protective. When the baby went up for a breath, mom also went up every time. Mom would pause for a while, and then take off in the opposite direction. The escort was relaxed.

When & Where: 15

Sep, outside Foelifuka.





24. KIRI ♀

South of Ovaka, in extremely murky water. Was like swimming through fog, hence "kiri", which means fog in Japanese.

Mom was wary of swimmers. Calf was playful and curious.

Mom has a pronounced hooked dorsal.

When & Where: 17 Sep, south side of Ovaka.

