

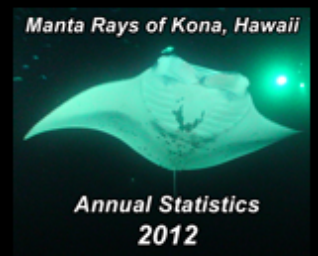
# Manta Rays in Kona Hawaii

## Annual Statistics for 2012

Martina Wing - Wednesday, May 15, 2013

Aloha, we have completed the Manta Ray Statistics for 2012. Click here to open/download the accompanying 7-page pdf-file.

All statistics are based on personal observations and review of video footage of each specific night dive on a given date. We would like to thank all contributors who make these statistics as complete and accurate as possible. A Special Mahalo to Luke, David and Katie from Kona Diving Company as well as Jonathan from Big Island Divers.



### The Top 3 Manta Rays in 2012



We had two **No.1** Manta Rays in 2012!

**1. Place:** **Koie Ray** and **Blain Ray**, came to feed **245** times

**3. Place:** **Vicky Ray**, she was seen **232** times

### The Top 20 in 2012

Place	Manta Ray	# of Sightings
4	Lefty	231
5	Vinny Ray	217
6	Grayer	209
7	Shirley	205
8	Kailey	184
9	Cara Ray	183
10	Melainah	172
11	Timbaktu	159
12	Ho Ray	158
13	Jana Ray	153
13	Tim	153
15	Sugar Ray	150
16	Mango	147
17	Capt. Mike	142
18	Big Bertha	139
18	Delaney	139
20	Re-Nata	128

### The largest "Cast on Set"

- On July 4th, 2012 we saw the highest number of **42** individuals in one night, which sets a NEW record number of Rays at "Manta Heaven" (Airport location) (see page 5).
- During the month of April 2012 we saw the highest number of different individuals at 62 (see Page 7).
- In 2012 we saw 82 individual Manta Rays (an increase of 10 from 2011) during the snorkel/dive activity at "Manta Heaven" (Airport location) and "Manta Village" (Sheraton/Keauhou location) (see Page 3).



### New Arrivals – Rookies of the year

3 new Manta Rays were identified during the night activity in 2012 (see Page 3 and 4):

- Amanda Ray - She was identified October 22, 2012 at Manta Village. From her identification to the end of 2012 she was seen 5 times. She was very shy and stayed close to the bottom to feed on the plankton.
- Orion Ray - Orion was first seen on September 21, 2012 at Manta Village. He was seen one more time after his identification. Both times he came to the lights, but was very shy.
- Daniel Ray - Daniel was identified April 8, 2012 at Manta Heaven. He was seen 7 times in 2012.

All 3 pups had a wingspan of 3-5 feet.

### Interesting Facts

- Delaney Ray was identified in August of 2008 and was not seen again until May of 2011. In 2011 we saw her 43 times, and in 2012 she made it into the TOP 20 with 139 sightings.
- Mango jumped from No. 37 with 18 sightings in 2011 into the TOP 20 to Place No. 16 with 147 sightings.
- "Youngster" Tim Ray made it into the TOP 20, although he only started appearing in March 2012.
- "W" Ray has been known as long as "Lefty" (since 1979 – over 34 years ago!). We saw "W" only 3 times in 2012 (04/26, 04/30 and 05/01/12), but the really exciting news is that she was pregnant at that time. Her belly was huge and males followed her very closely (check out this short video). It is still a mystery how long Manta Rays live, but we can speculate from "Lefty" and "W". It is even more incredible news to understand that a female can reproduce at this age!!

**"W" Ray**



**Pregnant - May 2012**





### MIA's & Cameos

- We are sad to say that we have not seen Capt. Kirk since June 14, 2012. He had made regular appearances (73 times) at Manta Heaven until then. He is a Manta Ray without a tail and very easy to spot. We hope he is just on an "extended vacation".
- Guillermo, Coral and Kai-Zed made one-time appearances at Manta Heaven in 2012. It is nice to know that they are still around as they have not been seen since they were identified in 2007 (Guillermo) and 2009 (Coral). It was also good to see that Kai-Zed (ID'd in 2011) "checked in" at Manta Heaven last year.



### Lunar Phase: Fact or Fiction?

As in the 2011 statistics, the 2012 numbers suggest that there is no direct correlation between moon phase and manta sightings (see Page 5).

### What are the odds?

- Page 6 of our pdf file will show the overview of the ratio of possible charters and successful Manta Ray Sightings for each month as well as the average number of individual Manta Rays.

"Manta Heaven" participants got skunked 15 times, "Manta Village" participants 21 times in 2012.

The probability of seeing at least one Manta Ray in 2012 was:

Manta Heaven: **95 %**      Manta Village: **93%**

Wow, the possibility to see a Manta Ray on the Kona Coast during a night time adventure is over 90% now (up from 88% in 2011). These are incredible numbers for creatures "in the wild".

- The average number of individuals at "Manta Heaven" was 14 (an increase from 7 in 2011) and at "Manta Village" was 3 Manta Rays for 2012 (up from 2 in 2011).



### "High mileage" mantas



Manta Rays sometimes travel the distance of approx. 14 miles between the dive sites within a time frame of 24 – 96 hours (see Page 7). We kept track of those "Travelers" and observed that 28 Manta Rays swam between Manta Village and Manta Heaven or vice versa.

Like in 2011, Melainah Ray is the "Traveler of the year 2012". She moved up and down the coast 26 times, 10 months of the year and in July and December, 5 times.

Big Bertha, Lefty and Vallaray also did their share of traversing their home range and using the night feeding areas to their advantage.

## Disturbing Trends & Injuries

### Trend 1:

We have seen an increase in the number of swimmers and kayakers coming from shore at the Sheraton Keauhou location (Manta Village). While guests of the boat operators are briefed to the existing guidelines so as to safely and responsibly interact with the wild life, this (regrettably) is not the case with participants from shore. We have witnessed them diving down and touching the mantas on a number of occasions. We are concerned that the manta rays may "learn" that the lighted, feeding areas should be avoided during certain time periods, possibly causing them to alter there "schedule" to avoid humans.

### Trend 2:

2012 also brought an increase of tour operators who began using "hull lighting" to attract the Manta Rays close to their specific boats and away from the long-established, centrally located viewing area thereby "fragmenting" the attending manta rays. This practice has also caused the manta rays to sustain impact injuries due to the close proximity of those lights to boat hulls, propellers, rudders and ladders.

Underwater hull lighting creates an unsafe feeding environment for the mantas and has resulted in injuries to the mantas that have been witnessed and well-documented. So, while there is statutory language in place that protects the manta rays from being captured or killed, no such language exists that offers protection from injury.

In an attempt to address this and other problems, the local manta industry (at the strong suggestion of State and Federal authorities), united to create "Tour Operator Standards" for the Manta Activity.

A "Manta Committee" was formed in late 2012, with approx. 80% representation, to establish and implement Operator Standards for ALL the commercial operators to follow for the Greater Good:

1. Increase the safety of the Manta Rays and their habitat.
2. Increase the safety of the users and participants of the manta tour experience.
3. Establish community practices and to educate those people involved.

We are working within the Manta Operator community towards complete compliance as there is a fair amount of resistance to implementation.

### Injuries:

As stated above, our resident population of Manta Rays has had to sustain injuries due to engagement with boats. Jana Ray, in particular, has had a rough year sustaining serious injury to her right cephalic fin as well as showing evidence of various other injuries (visualized in this video).

## Jana Ray



## Injuries sustained in 2012



### Conclusions

Due to the sheer number of Manta Rays observed, especially at "Manta Heaven", and the numbers of pups produced, we believe that, overall, the resident population is healthy and thriving.

On July 4th, 2012 we saw the highest number of individuals (42), which sets a NEW record number of Rays at "Manta Heaven". We saw [Teresa Ray](#) bring her pregnancy to term in February/March 2012 and observed a pregnant "W" in May 2012.

With an over a 90% probability of seeing a Manta Ray in 2012, Kona, Hawaii continues to be THE destination to see these Gentle Giants in their natural habitat!

If you choose to participate in one of the excursions, we encourage you to go with a company that is mindful of and complies with [Tour Operator Guidelines](#).

We hope you have enjoyed the presentation of this information. Once again, Mahalo to those that helped us compile this data. We are looking forward to doing this again for 2013.

With Aloha  
Martina, Jim and Ryan





## Statistics of Manta Ray Sightings on the Kona Coast, Hawaii, USA during the Night Dive and Snorkel Activity at "Manta Heaven" and "Manta Village" in 2012

### **Source:**

- These annual statistics are based on the monthly statistics published by Martina Wing, James Wing and Ryan Leinbach of Ocean Wings Hawaii, Inc.
- You can find the source material on their website: <http://www.mantarayshawaii.com/statistics.html>
- All statistics are based on personal observations and review of video footage of each specific night dive.
- We would like to thank all contributors who make these statistics as complete and accurate as possible. A Special Mahalo to Luke, David and Katie from Kona Diving Company as well as Jonathan from Big Island Divers.

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**"TOP 20" Manta Rays at "Manta Heaven" and "Manta Village" in 2012 (condensed)**

Kona Coast, Big Island of Hawaii, USA

- order by appearance -

Legend: **"TOP 3" Manta Rays 2012**  
**"TOP 3" Manta Ray of the month**

2012	January	February	March	April	May	June	July	August	September	October	November	December	Σ	
1	<b>Blain Ray</b>	21	14	26	28	14	24	23	20	22	21	13	19	245
2	<b>Koie</b>	21	13	28	25	16	23	26	21	25	16	11	20	245
3	<b>Vicky</b>	24	14	29	26	11	25	18	12	25	26	10	12	232
4	<b>Lefty</b>	25	7	18	20	15	22	23	19	25	21	17	19	231
5	<b>Vinny Ray</b>	20	13	26	26	13	17	20	14	23	23	10	12	217
6	<b>Grayer</b>	23	7	21	0	15	27	24	19	24	26	12	11	209
7	<b>Shirley</b>	20	11	27	23	10	27	25	8	6	14	16	18	205
8	<b>Kailey</b>	14	17	11	16	21	23	23	15	12	13	9	10	184
9	<b>Cara Ray</b>	16	0	21	22	13	20	19	9	20	24	9	10	183
10	<b>Melainah</b>	9	13	21	19	5	19	26	11	1	14	17	17	172
11	<b>Timbuktu</b>	14	10	19	18	9	16	13	12	14	18	7	9	159
12	<b>Ho Ray</b>	19	10	23	20	10	1	0	11	21	19	8	16	158
13	<b>Jana Ray</b>	12	15	2	11	10	11	7	17	17	14	20	17	153
14	<b>Tim</b>	0	0	1	17	11	24	25	12	23	4	20	16	153
15	<b>Sugar Ray</b>	13	7	16	20	7	15	10	5	19	21	5	12	150
16	<b>Mango</b>	4	2	17	19	10	13	17	17	7	19	10	12	147
17	<b>Capt. Mike</b>	12	10	22	19	4	11	13	6	17	10	10	8	142
18	<b>Big Bertha</b>	9	9	12	16	11	15	21	11	11	12	4	8	139
19	<b>Delaney</b>	12	6	17	14	3	10	19	5	19	16	7	11	139
20	<b>Re-Nata</b>	16	7	11	16	2	8	18	4	16	10	7	13	128

☞ For complete list in order by appearance, see Page 3

☞ For complete list in alphabetical order, see Page 4

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**"TOP 20" Manta Ray at "Manta Heaven" and "Manta Village" in 2012**

Kona Coast, Big Island of Hawaii, USA

- order by appearance -

Legend: Female Manta Ray  
Male Manta Ray

**"TOP 3" Manta Rays 2012**  
**"TOP 3" Manta Ray of the month**

New ID's in 2012

2012		January	February	March	April	May	June	July	August	September	October	November	December	Σ
1	<b>Blain Ray</b>	21	14	26	28	14	24	23	20	22	21	13	19	245
2	<b>Koie</b>	21	13	28	25	16	23	26	21	25	16	11	20	245
3	<b>Vicky</b>	24	14	29	26	11	25	18	12	25	26	10	12	232
4	<b>Lefty</b>	25	7	18	20	15	22	23	19	25	21	17	19	231
5	<b>Vinny Ray</b>	20	13	26	26	13	17	20	14	23	23	10	12	217
6	<b>Grayer</b>	23	7	21	0	15	27	24	19	24	26	12	11	209
7	<b>Shirley</b>	20	11	27	23	10	27	25	8	6	14	16	18	205
8	<b>Kailey</b>	14	17	11	16	21	23	23	15	12	13	9	10	184
9	<b>Cara Ray</b>	16	0	21	22	13	20	19	9	20	24	9	10	183
10	<b>Melainah</b>	9	13	21	19	5	19	26	11	1	14	17	17	172
11	<b>Timbuktu</b>	14	10	19	18	9	16	13	12	14	18	7	9	159
12	<b>Ho Ray</b>	19	10	23	20	10	1	0	11	21	19	8	16	158
13	<b>Jana Ray</b>	12	15	2	11	10	11	7	17	17	14	20	17	153
14	<b>Tim</b>	0	0	1	17	11	24	25	12	23	4	20	16	153
15	<b>Sugar Ray</b>	13	7	16	20	7	15	10	5	19	21	5	12	150
16	<b>Mango</b>	4	2	17	19	10	13	17	17	7	19	10	12	147
17	<b>Capt. Mike</b>	12	10	22	19	4	11	13	6	17	10	10	8	142
18	<b>Big Bertha</b>	9	9	12	16	11	15	21	11	11	12	4	8	139
19	<b>Delaney</b>	12	6	17	14	3	10	19	5	19	16	7	11	139
20	<b>Re-Nata</b>	16	7	11	16	2	8	18	4	16	10	7	13	128
21	<b>Uhane Nui</b>	19	5	24	7	9	7	15	10	9	11	3	5	124
22	<b>Vallaray</b>	10	5	14	16	4	5	18	16	8	0	0	12	108
23	<b>Margo</b>	7	6	1	9	9	9	12	3	15	10	10	11	102
24	<b>Alexander</b>	10	7	12	13	1	12	11	7	7	6	7	8	101
25	<b>Curly Ray</b>	11	3	8	15	4	4	11	10	12	12	3	6	99
26	<b>Emma</b>	3	3	6	28	10	11	10	7	0	2	5	6	91
27	<b>Lisa Rae</b>	6	5	5	1	3	8	17	10	18	6	5	6	90
28	<b>Cousteau</b>	4	0	7	6	10	14	12	11	5	13	4	2	88
29	<b>Hayden Ray</b>	2	0	0	0	3	7	10	11	21	16	4	2	76
30	<b>Capt. Kirk</b>	16	5	19	17	13	3	0	0	0	0	0	0	73
31	<b>Who Ray</b>	1	2	10	15	7	11	10	5	3	1	5	1	71
32	<b>Doug Ray</b>	3	2	8	9	4	5	10	11	2	4	5	2	65
33	<b>Bob'n'Ray</b>	5	1	1	3	7	13	13	7	8	1	2	3	64
34	<b>Rebekah</b>	0	3	8	15	5	8	11	5	4	4	1	0	64
35	<b>Hans Ray</b>	8	4	3	2	3	12	14	11	2	0	0	0	59
36	<b>Ralph's Ray</b>	0	0	5	3	0	1	7	4	16	7	13	3	59
37	<b>Kegan</b>	7	5	16	14	3	0	2	5	0	1	2	2	57
38	<b>Jay Ray</b>	7	2	4	7	4	5	9	5	4	4	4	0	55
39	<b>Linda</b>	1	7	2	2	0	1	6	11	11	8	2	2	53
40	<b>Andrea Ray</b>	1	4	5	4	5	5	11	6	1	1	2	0	45
41	<b>Teresa</b>	4	9	6	14	5	0	0	0	0	0	2	4	44
42	<b>Eli Ray</b>	0	0	0	18	0	0	0	4	11	5	0	5	43
43	<b>Hook</b>	1	1	2	1	3	2	9	9	3	2	3	0	36
44	<b>Maluhia</b>	0	0	0	0	4	5	9	0	16	0	2	0	36
45	<b>Scar</b>	6	1	4	6	1	5	7	0	6	0	0	0	36
46	<b>Otis</b>	0	0	0	6	3	6	7	2	5	1	1	3	34
47	<b>Ola'i</b>	9	1	11	1	2	0	0	1	1	0	3	2	31
48	<b>Keniki</b>	3	0	0	3	1	4	3	6	3	4	2	1	30
49	<b>Spatter</b>	0	0	0	2	6	11	8	0	0	0	0	0	27
50	<b>Stevie</b>	0	3	0	0	1	4	6	8	0	0	2	0	24
51	<b>BooBoo</b>	0	1	0	2	0	2	7	5	3	0	0	0	20
52	<b>Johnny Ray</b>	6	0	4	1	1	0	0	0	0	2	2	3	19
53	<b>Miles</b>	0	1	2	2	0	1	0	5	5	2	0	1	19
54	<b>Kapono</b>	5	3	6	3	0	0	0	1	0	0	0	0	18
55	<b>Weniki</b>	0	0	10	7	1	0	0	0	0	0	0	0	18
56	<b>Jihane</b>	1	0	0	3	2	6	5	0	0	0	0	0	17
57	<b>Miki</b>	2	4	2	2	1	0	0	3	0	1	1	1	17
58	<b>Lightning</b>	5	0	2	2	0	0	0	0	2	3	0	1	15
59	<b>Reece</b>	3	2	3	3	2	0	0	0	0	0	1	1	15
60	<b>Tessa</b>	0	0	0	0	0	0	2	4	3	0	0	1	10
61	<b>Takahashi Ray</b>	0	1	0	2	3	3	0	0	0	0	0	0	9
62	<b>Isabel</b>	0	1	6	1	0	0	0	0	0	0	0	0	8
63	<b>Kawika</b>	0	0	0	0	0	0	0	5	1	2	0	0	8
64	<b>Daniel</b>	0	0	0	1	0	1	0	0	0	0	0	5	7
65	<b>X-Ray</b>	0	0	4	2	0	0	0	0	0	0	0	0	6
66	<b>Amanda Ray</b>	0	0	0	0	0	0	0	0	0	1	3	1	5
67	<b>Mac Ray</b>	2	0	0	0	0	0	1	2	0	0	0	0	5
68	<b>Knight</b>	0	0	3	1	0	0	0	0	0	0	0	0	4
69	<b>Jordan</b>	0	0	0	0	0	0	0	0	0	0	1	2	3
70	<b>Nick</b>	1	0	0	0	0	0	1	0	0	1	0	0	3
71	<b>Salem</b>	0	0	0	0	2	0	0	1	0	0	0	0	3
72	<b>Shelly Ray</b>	0	0	2	0	0	0	0	1	0	0	0	0	3
73	<b>"W"</b>	0	0	0	2	1	0	0	0	0	0	0	0	3
74	<b>Abigail</b>	0	0	0	0	0	2	0	0	0	0	0	0	2
75	<b>J9</b>	0	0	0	0	0	0	0	0	0	2	0	0	2
76	<b>Ke'kai'malu</b>	0	0	0	0	0	0	2	0	0	0	0	0	2
77	<b>Orion Ray</b>	0	0	0	0	0	0	0	0	1	0	1	0	2
78	<b>Zach-a-Ray</b>	0	0	1	0	0	0	0	0	0	1	0	0	2
79	<b>Coral</b>	0	0	0	1	0	0	0	0	0	0	0	0	1
80	<b>Guillermo</b>	0	0	0	0	1	0	0	0	0	0	0	0	1
81	<b>Kai-Zed</b>	0	0	0	0	0	0	0	0	0	0	1	0	1
82	<b>Rusty</b>	0	0	0	0	0	0	0	0	0	0	0	1	1



# Manta Ray Sightings by Individual at "Manta Heaven" and "Manta Village" in 2012

Kona Coast, Big Island of Hawaii, USA

- alphabetical order -

Legend: Female Manta Ray  
Male Manta Ray

"TOP 3" Manta Rays 2012  
"TOP 3" Manta Ray of the month

New ID's in 2012

2012	January	February	March	April	May	June	July	August	September	October	November	December	Σ	
1	Abigail	0	0	0	0	0	2	0	0	0	0	0	2	
2	Alexander	10	7	12	13	1	12	11	7	7	6	7	8	101
3	Amanda Ray	0	0	0	0	0	0	0	0	1	3	1	5	
4	Andrea Ray	1	4	5	4	5	11	6	1	1	2	0	45	
5	Big Bertha	9	9	12	16	11	15	21	11	11	12	4	8	139
6	Blain Ray	21	14	26	28	14	24	23	20	22	21	13	19	245
7	Bob'n'Ray	5	1	1	3	7	13	13	7	8	1	2	3	64
8	BooBoo	0	1	0	2	0	2	7	5	3	0	0	0	20
9	Capt. Kirk	16	5	19	17	13	3	0	0	0	0	0	0	73
10	Capt. Mike	12	10	22	19	4	11	13	6	17	10	10	8	142
11	Cara Ray	16	0	21	22	13	20	19	9	20	24	9	10	183
12	Coral	0	0	0	1	0	0	0	0	0	0	0	0	1
13	Cousteau	4	0	7	6	10	14	12	11	5	13	4	2	88
14	Curly Ray	11	3	8	15	4	4	11	10	12	12	3	6	99
15	Daniel	0	0	0	1	0	1	0	0	0	0	0	5	7
16	Delaney	12	6	17	14	3	10	19	5	19	16	7	11	139
17	Doug Ray	3	2	8	9	4	5	10	11	2	4	5	2	65
18	Eli Ray	0	0	0	18	0	0	0	4	11	5	0	5	43
19	Emma	3	3	6	28	10	11	10	7	0	2	5	6	91
20	Grayer	23	7	21	0	15	27	24	19	24	26	12	11	209
21	Guillermo	0	0	0	0	1	0	0	0	0	0	0	0	1
22	Hans Ray	8	4	3	2	3	12	14	11	2	0	0	0	59
23	Hayden Ray	2	0	0	0	3	7	10	11	21	16	4	2	76
24	Ho Ray	19	10	23	20	10	1	0	11	21	19	8	16	158
25	Hook	1	1	2	1	3	2	9	9	3	2	3	0	36
26	Isabel	0	1	6	1	0	0	0	0	0	0	0	0	8
27	Jana Ray	12	15	2	11	10	11	7	17	17	14	20	17	153
28	Jay Ray	7	2	4	7	4	5	9	5	4	4	4	0	55
29	Jihane	1	0	0	3	2	6	5	0	0	0	0	0	17
30	Johnny Ray	6	0	4	1	1	0	0	0	0	2	2	3	19
31	Jordan	0	0	0	0	0	0	0	0	0	0	1	2	3
32	J9	0	0	0	0	0	0	0	0	0	2	0	0	2
33	Kailey	14	17	11	16	21	23	23	15	12	13	9	10	184
34	Kai-Zed	0	0	0	0	0	0	0	0	0	0	1	0	1
35	Kapono	5	3	6	3	0	0	0	1	0	0	0	0	18
36	Kawika	0	0	0	0	0	0	0	5	1	2	0	0	8
37	Kegan	7	5	16	14	3	0	2	5	0	1	2	2	57
38	Keniki	3	0	0	3	1	4	3	6	3	4	2	1	30
39	Knight	0	0	3	1	0	0	0	0	0	0	0	0	4
40	Koie	21	13	28	25	16	23	26	21	25	16	11	20	245
41	Ke'kai'malu	0	0	0	0	0	0	2	0	0	0	0	0	2
42	Lefty	25	7	18	20	15	22	23	19	25	21	17	19	231
43	Lightning	5	0	2	2	0	0	0	0	2	3	0	1	15
44	Linda	1	7	2	2	0	1	6	11	11	8	2	2	53
45	Lisa Rae	6	5	5	1	3	8	17	10	18	6	5	6	90
46	Mac Ray	2	0	0	0	0	0	1	2	0	0	0	0	5
47	Maluhia	0	0	0	0	4	5	9	0	16	0	2	0	36
48	Mango	4	2	17	19	10	13	17	17	7	19	10	12	147
49	Margo	7	6	1	9	9	9	12	3	15	10	10	11	102
50	Melainah	9	13	21	19	5	19	26	11	1	14	17	17	172
51	Miki	2	4	2	2	1	0	0	3	0	1	1	1	17
52	Miles	0	1	2	2	0	1	0	5	5	2	0	1	19
53	Nick	1	0	0	0	0	0	1	0	0	1	0	0	3
54	Ola'i	9	1	11	1	2	0	0	1	1	0	3	2	31
55	Orion Ray	0	0	0	0	0	0	0	0	1	0	1	0	2
56	Otis	0	0	0	6	3	6	7	2	5	1	1	3	34
57	Ralph's Ray	0	0	5	3	0	1	7	4	16	7	13	3	59
58	Rebekah	0	3	8	15	5	8	11	5	4	4	1	0	64
59	Reece	3	2	3	3	2	0	0	0	0	0	1	1	15
60	Re-Nata	16	7	11	16	2	8	18	4	16	10	7	13	128
61	Rusty	0	0	0	0	0	0	0	0	0	0	0	1	1
62	Salem	0	0	0	0	2	0	0	1	0	0	0	0	3
63	Scar	6	1	4	6	1	5	7	0	6	0	0	0	36
64	Shelly Ray	0	0	2	0	0	0	0	1	0	0	0	0	3
65	Shirley	20	11	27	23	10	27	25	8	6	14	16	18	205
66	Spatter	0	0	0	2	6	11	8	0	0	0	0	0	27
67	Stevie	0	3	0	0	1	4	6	8	0	0	2	0	24
68	Sugar Ray	13	7	16	20	7	15	10	5	19	21	5	12	150
69	Takahashi Ray	0	1	0	2	3	3	0	0	0	0	0	0	9
70	Teresa	4	9	6	14	5	0	0	0	0	0	2	4	44
71	Tessa	0	0	0	0	0	0	2	4	3	0	0	1	10
72	Tim	0	0	1	17	11	24	25	12	23	4	20	16	153
73	Timbukt	14	10	19	18	9	16	13	12	14	18	7	9	159
74	Uhane Nui	19	5	24	7	9	7	15	10	9	11	3	5	124
75	Vallaray	10	5	14	16	4	5	18	16	8	0	0	12	108
76	Vicky	24	14	29	26	11	25	18	12	25	26	10	12	232
77	Vinny Ray	20	13	26	26	13	17	20	14	23	23	10	12	217
78	"W"	0	0	0	2	1	0	0	0	0	0	0	0	3
79	Weniki	0	0	10	7	1	0	0	0	0	0	0	0	18
80	Who Ray	1	2	10	15	7	11	10	5	3	1	5	1	71
81	X-Ray	0	0	4	2	0	0	0	0	0	0	0	0	6
82	Zach-a-Ray	0	0	1	0	0	0	0	0	0	1	0	0	2





# Number of Manta Ray Sightings by Day and Month at "Manta Heaven" and "Manta Village" in 2012

Kona Coast, Big Island of Hawaii, USA

Legend: **Highest Number of Sightings during the month**  
**Highest Number of Sightings in 2012**

JANUARY 2012																														
Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Lunar Phase																														
Manta Heaven (North)																														
Manta Village (South)																														
SUMMARY																														

FEBRUARY 2012																												
Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Lunar Phase																												
Manta Heaven (North)																												
Manta Village (South)																												
SUMMARY																												

MARCH 2012																														
Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Lunar Phase																														
Manta Heaven (North)																														
Manta Village (South)																														
SUMMARY																														

APRIL 2012																													
Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Lunar Phase																													
Manta Heaven (North)																													
Manta Village (South)																													
SUMMARY																													

MAY 2012																														
Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Lunar Phase																														
Manta Heaven (North)																														
Manta Village (South)																														
SUMMARY																														

JUNE 2012																													
Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Lunar Phase																													
Manta Heaven (North)																													
Manta Village (South)																													
SUMMARY																													

JULY 2012																														
Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Lunar Phase																														
Manta Heaven (North)																														
Manta Village (South)																														
SUMMARY																														

AUGUST 2012																														
Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Lunar Phase																														
Manta Heaven (North)																														
Manta Village (South)																														
SUMMARY																														

SEPTEMBER 2012																													
Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Lunar Phase																													
Manta Heaven (North)																													
Manta Village (South)																													
SUMMARY																													

OCTOBER 2012																														
Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Lunar Phase																														
Manta Heaven (North)																														
Manta Village (South)																														
SUMMARY																														

NOVEMBER 2012																													
Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Lunar Phase																													
Manta Heaven (North)																													
Manta Village (South)																													
SUMMARY																													

DECEMBER 2012																														
Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Lunar Phase																														
Manta Heaven (North)																														
Manta Village (South)																														
SUMMARY																														



**"Ratio of Charters to Successful Manta Ray Sightings" (Success Rate)  
and "Average Number of Sightings"  
at "Manta Heaven" and "Manta Village" in 2012**

Kona Coast, Big Island of Hawaii, USA

2012	Success Rate	actual charters	How many times did we get skunked?	How many nights did we see Manta Rays?	no info available	Average Number of Sightings based on actual charter	possible charters
Manta Heaven (North)	95%	352	15	337	14	14	366
Manta Village (South)	93%	276	21	255	90	3	366
<b>JANUARY 2012</b>							
Manta Heaven (North)	100%	29	0	29	2	14	31
Manta Village (South)	100%	18	0	18	13	4	31
<b>FEBRUARY 2012</b>							
Manta Heaven (North)	75%	24	6	18	5	9	29
Manta Village (South)	100%	21	0	21	8	3	29
<b>MARCH 2012</b>							
Manta Heaven (North)	100%	31	0	31	0	18	31
Manta Village (South)	63%	27	10	17	4	1	31
<b>APRIL 2012</b>							
Manta Heaven (North)	100%	29	0	29	1	20	30
Manta Village (South)	86%	21	3	18	9	3	30
<b>MAY 2012</b>							
Manta Heaven (North)	83%	30	5	25	1	8	31
Manta Village (South)	96%	24	1	23	7	4	31
<b>JUNE 2012</b>							
Manta Heaven (North)	100%	30	0	30	0	15	30
Manta Village (South)	92%	26	2	24	4	4	30
<b>JULY 2012</b>							
Manta Heaven (North)	97%	31	1	30	0	18	31
Manta Village (South)	100%	23	0	23	8	4	31
<b>AUGUST 2012</b>							
Manta Heaven (North)	93%	30	2	28	1	12	31
Manta Village (South)	100%	28	0	28	3	4	31
<b>SEPTEMBER 2012</b>							
Manta Heaven (North)	100%	30	0	30	0	17	30
Manta Village (South)	81%	26	5	21	4	1	30
<b>OCTOBER 2012</b>							
Manta Heaven (North)	100%	30	0	30	1	14	31
Manta Village (South)	100%	19	0	19	12	3	31
<b>NOVEMBER 2012</b>							
Manta Heaven (North)	100%	30	0	30	0	9	30
Manta Village (South)	100%	24	0	24	6	2	30
<b>DECEMBER 2012</b>							
Manta Heaven (North)	96%	28	1	27	3	11	31
Manta Village (South)	100%	19	0	19	12	3	31

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**"Travelers" between "Manta Heaven" and "Manta Village" in 2012**  
 Kona Coast, Big Island of Hawaii, USA

Each count equals a travel of approx. 14 miles between the sites within 24 h and 96 h

2012		January	February	March	April	May	June	July	August	September	October	November	December	Σ
1	<b>Big Bertha</b>	3	2		3	6	1	3	1		1	1	3	<b>24</b>
2	BooBoo				1		1	2	1					5
3	Cara Ray					2								2
4	Delaney	1	2	2					1		1			7
5	Hans Ray						4	3		1				8
6	Ho Ray					2								2
7	Kailay Ray			1	2		2	2		3	2	1	1	14
8	Kapono	1		1										2
9	Koie Ray	2				2		4	5		3	2		18
10	<b>Lefty</b>	2			2	5	4	2	4		4	1		<b>24</b>
11	Lightning	2												2
12	Linda Ray		2		1			1	3		1	1		9
13	Maluhia						1							1
14	Mango				1	4	2	1	2		1			11
15	Margo	1			3		1	3	1	2	2	2	1	16
16	<b>Melainah</b>	2	2	3	1		2	5		2	1	3	5	<b>26</b>
17	Ralph's Ray									2	1	2		5
18	Reece	2	1											3
19	ReNata	2		1	1		1	2		1	1		2	11
20	Scar			1			1							2
21	Sugar Ray					2								2
22	Takahashi Ray					1								1
23	Teresa Ray	2	1	1	5	1								10
24	Tim Ray												1	1
25	Timbaktu				1	1								2
26	<b>Vallaray</b>	1	2	4	3		1	1		3			4	<b>19</b>
27	Vicky Ray				1	2		2	1			2		8
28	"W"				1									1



**Total Number of Individual Manta Rays seen during the Night Dive per month in 2012**

Kona Coast, Big Island of Hawaii, USA

2012	Total Number of Individual Manta Rays seen each month during Night Dive
January	50
February	47
March	55
<b>April</b>	<b>62</b>
May	56
June	52
July	51
August	54
September	50
October	50
November	51
December	50