



NEWSCAST - 2

August-December 2017



Officially launched in September 2016, the Manta Initiative in New Caledonia aims to enhance the knowledge on manta rays in the territory, and promote conservation through strong collaboration with government, non-profit partners, and the local communities.

Manta rays are an emblematic species in New Caledonia and the broader region. However, while they are large, there is very little known about them. In addition, these majestic animals are ambassadors for the waters of New Caledonia — a sanctuary spanning over thousands of square kilometers. The data that we gather through scientific research will contribute and encourage manta ray conservation, and more broadly, better management of their habitats.

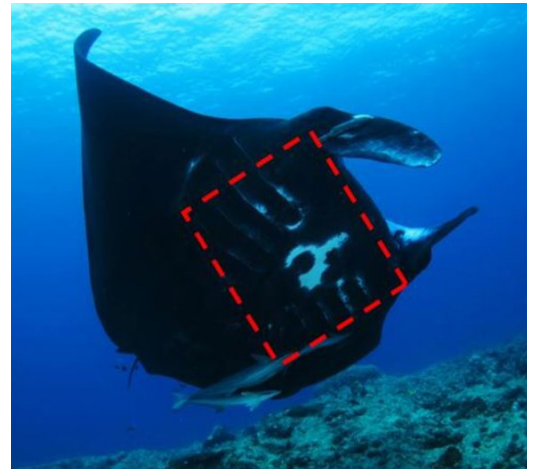
This report presents activities carried out by the Manta Initiative during August to December 2017.

PROGRESS & IMPACT

A growing database

Since July 2017, we have continued to contribute to the manta ray database. In addition, there has been an increase in contributors who were inspired by previous reports and collateral.

Photos and videos that clearly show the ventral side of a manta ray allows scientists to identify the individual, providing critical information on the population as well as migration data. This also sheds light on how various habitats or sites in the oceans are linked to each other.



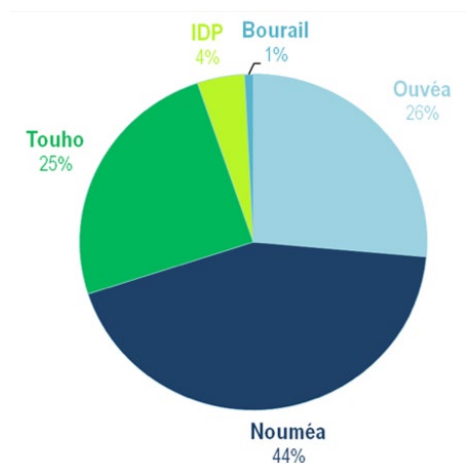
Population characteristics

During the past 6 months, 18 new contributors have shared 39 new manta photo identifications with the Manta Initiative, bringing the total number of individuals in the database to 239.

Out of these 39 individuals, 28 were observed in Ouvéa, 7 in Noumea between the Boulari and Dumbéa passage, and 4 in L'Îles des Pins.

A large number of Manta rays have been observed in Ouvéa in October, which seems to be a mating season as groups of more than a dozen individuals have been observed exhibiting similar behaviors.

There are several breeding periods over the course of the year. In other sites, there is not enough information on mating seasons however it is suspected to occur during October to November.





Mating rituals

Manta rays form a mating train during the mating season, where males line up to follow a female. She will then swim quickly and perform spinning and looping maneuvers to test the fitness of the male. These trains can last for hours until the most persistent male prevails. The female will then accept the male, who will bite the tip of her wing with his mouth.

Site Connectivity

Photo identification work continues to reveal the connectivity between various sites. Until now, Manta rays have been observed at the sites of Nouméa, Touho, Ouvéa and Isle of Pines, proving the existence of these connections.

In November, a male named Romain was photographed in Bourail. Prior to this observation, he had been observed only on Noumea before — proving connectivity between Bourail and Nouméa!



Manta survey progress

The goal of our survey is to identify other manta aggregation sites in New Caledonia. Being able to pinpoint these locations will allow us to identify future study sites, extend our sampling and further refine our knowledge of the manta ray population in New Caledonia.

The survey launched in May, allowed us to identify several sites within the territory's waters. An analysis of the data indicates that some sites will potentially host more manta rays than other sites. When conducting such studies, we also take into account site accessibility, the presence of dive operators, the management status of the site, and its governance.

The majority of testimonies collected was concentrated in the South Province and in particular on the West coast as a higher number of operators and observers operate there. Our surveys were distributed all around New Caledonia, which provided a broad overview and allowed us to zoom in on various points to advance our work. and Nouméa!

The next few surveys will be devoted to more in-depth field work to validate a number of sites. These results remain indicative and do not fully reflect the distribution of Manta rays in New Caledonia.



Along the West Coast: Manta rays are present throughout, along passes and the outer slopes of the reef. They have also been occasionally observed around islands inside the lagoon.

Further South: A group of manta rays is often observed in a site off the Isle of Pines.

On the East Coast: There is less evidence but large numbers of manta rays have been observed throughout the year in Touho, and on a rarer basis, in the lagoon around Hienghène or the Pouébo pass.

The Loyalty Islands: Ouvéa is a recognized site which hosts groups of manta rays all year round. Some more recent testimonies indicate the presence of manta rays in Lifou and Maré.

Complementing the survey results, analyses of satellite tagging data have indicated other sites of interest and have confirmed the presence of manta rays in certain sites mentioned in our surveys.

Among the sites that were not mentioned in the surveys: in the South, the Yves Merlet reserve and the five islands area in the Great South Lagoon, and in the East, Borendy, would likely house manta rays. The data does not distinguish the presence of a single individual or a grouping on these sites. However, since the tagged manta rays have lingered for a long time in these areas, it is likely that others were also present.

In general, it seems that the New Caledonian lagoon has a large number of sites favorable to Manta rays. This means that the population may potentially disperse, explaining the absence of large aggregations. In comparison, in some parts of the world, there are dozens or even hundreds of Manta rays that gather on a regular basis throughout the year on a single site.

Certain sites such as Ouvéa, Touho, and Nouméa are already validated as study sites, and we have to evaluate other sites to ascertain the most important sites to continue our study.

Manta Ray Tagging Program: Updates!

Since our last report, all seven tags have stopped sending information, and we have managed to retrieve one from the beach of Uitoé in July 2017. A resident of the town of Païta returned the tag after getting wind of our appeals via social networks.

We have reviewed the data from two tags. Iline (CD-MA-0004) was detected feeding at the Dumbea Pass on 1 November 2017 and Féroce (CD-MA-0036) was detected at the cleaning station of the Boulari Pass on 27 December 2017.

In 2018, the Manta Initiative intends to double up its efforts to learn even more about the manta rays of New Caledonia. We plan to deploy satellite tags on manta rays and obtain further genetic samples that will reveal their movements and behaviors.



Above: A tag that detached from a manta and was subsequently retrieved.



Communications Efforts

The Manta Initiative has organized and participated in events to raise awareness of manta rays, the importance of protecting them and the science behind it. These activities also allow us to expand our observer network and increase the effectiveness of this work — which is largely based on citizen science.

The Rays and Sharks Exhibit at the Aquarium des Lagons

The Aquarium des Lagons organized an exhibition from July to September 2017 on the theme of rays and sharks. Among the rays, the manta ray was highlighted as part of the exhibit. •

An interactive animation!

In collaboration with the Aquarium des Lagons and Conservation International, an animated quiz was created for children to participate in. It was presented by the Aquarium's dynamic volunteers several times a day. This quiz, which lasts about twenty minutes, includes information on the characteristics of manta rays and their lives. Both children and parents were very excited to learn more about this mysterious animal.



Scientific Presentations

Scientific Presentations were featured during the exhibit dedicated to the Rays and Sharks, sharing not only the latest knowledge on manta rays around the world, but also the discoveries of our study in New Caledonia. The audience was extremely interested and curious, kicking off a long question and answer session.



The Manta Initiative at the Fête de la Science

In October 2017, at Boulari College, the Aquarium des Lagons's exhibit at the Fête de la Science was totally dedicated to manta rays. It highlighted the Manta Initiative's in New Caledonia. The public and students were able to attend scientific presentations and participate in the interactive animation all day long.



A film for 2018!

The Manta Initiative has organized and participated in the production of a film which highlights the links between the people and nature in New Caledonia, notably through the work done on manta rays. Emmy award-winning cinematographer, photographer and marine conservationist Shawn Heinrichs worked with Conservation International and Manta Trust on a 10-day mission and obtained incredible underwater footage. The film will be launched in May 2018.



A logo!

The Manta Initiative of New Caledonia has created a logo, with the support of the Aquarium des Lagons, and designed by AK studio.



OUR FINANCES

The Manta Initiative has benefited from substantial funding from our generous Japanese Donors, the Keidanren Nature Conservation Fund (KNCF). The funds will be dedicated to carrying out the scientific operations of the project and will also support our communication efforts for the next three years.

The South Province Research Encouragement Award has supported with a thesis grant to our PhD student, his doctorate may be completed within the next three years. Thanks to these funds, the student can be enrolled at the University of New Caledonia and the University of Queensland in Brisbane.

OUR PARTNERS

We provide our sincerest thanks to the following partners, without which our important work on manta rays could not have gone smoothly:

The Audio-Visual Commission has been a major partner in the dissemination of Manta Initiative's information in addition to the many photographs shared by these members. In September 2017, a manta ray photography contest was organized, and the Manta Initiative's scientists were invited to be part of the judging panel. 13 participants submitted 24 beautiful photographs of Manta rays.

The Hô-üt de Touho Association has provided great support to our field missions. The association is the first point of contact in the municipality and provides us direction on the best practices, administratively and customarily. The mayor encouraged us to build a serious collaboration with the local stakeholders, while the customary leaders have agreed to approve our study and our field missions in the commune. The Ho-ute Association and the Northern Province are continuing to provide support during the course of our study.

The Southern Province who has granted us authorization to take genetic samples from manta rays. We are in the midst of requesting for the other Provinces and the Government to provide this authorization to expand this study.

The University of Queensland and the Manta Project team have very kindly agreed to co-supervise the Manta Initiative's PhD student whose work will significantly contribute to advancing scientific knowledge and conservation of manta rays. This collaboration makes it possible to bring the study to a regional level, and to benefit from the expertise of an even larger network of scientists.

WE NEED YOUR HELP!

**You can help to protect manta rays in New Caledonia,
and support the development of the Manta Initiative!**

Send us pictures

The easiest way to help the initiative is through sending us photos or videos of manta rays. Your photos will contribute to the photo-identification database and provide more robust and more accurate results regarding manta movements and behaviors.

Email mantanc@aquarium.nc with the following information: Location, date, and comments (if any). The submitted pictures will be analyzed by the Manta Initiative team and a report detailing all the information on the observed manta will be sent to you in return.

Report manta sightings

Reporting observation of manta rays can help us study manta aggregations better. This can be done through email (see previous column) or by filling the investigation form that is continuously distributed via different platforms

Look out for our satellite tags

The Manta Initiative regularly broadcasts tag alerts, when tags are released from mantas, to maximize our chances of recovering them. Stay alert to any news concerning the Initiative and help relay information as much as possible.

We regularly post on the Aquarium des Lagons' Facebook page and through our mailing list.

