

What do we do with the photographic material?

First and foremost, we know exactly who photographed each and every image we have, and have their permission to have them in our collection. Then, we have 3 uses:

1. The database includes every image that we have and find valuable in assisting in the identification of a manta - perhaps only one wing, or one large natural marking - images a photographer might tend to reject. A manta twirling in a video giving only clips of different parts still permits us to identify it as a whole animal. Although we may show the Catalog to individual people from time to time, we do not use it in talks or lectures. People who do not want their work distributed or shown to the public will often contribute to the catalog, perhaps a small emailed JPEG, or a crop of a larger image.

2. This Guide is a printed booklet including only those images giving the most visual information per manta - a full shot of the ventral (belly) or dorsal (back) side, 6 small images per page. This is sent to people who have volunteered to contribute another pair of watchful eyes for us – dive masters and underwater photographers who can review their old images and watch for mantas in the future that have been seen before. Fewer mantas are in the Guide than in the Catalog - only a full view is shown to make it foolproof for the divers to identify mantas. As we send the Guide out only in paper form, and the images are small, they would be hard to photocopy for personal use.

3. Certain images illustrate manta characteristics or body parts - mouth, claspers, cephalic fins unfolding, remoras attaching and detaching. These are invaluable as slides or video clips when giving talks to students or new divers. We must have and will request authorization from the photographer in order to use images in this way.

To the photographer

Visual identification consists of information on the mantas' markings, rather than artistic images, and this is what we work with. This guide illustrates only the best dorsal and ventral views of the mantas from that perspective. We have on file many more photos of these and other mantas, which will assist us to identify animals in new photographs.

Although we are reasonably certain that the animals here are accurately represented, there is always the possibility of error. Please let us know, preferably by photo material, where corrections may be needed.

Any photograph you have that gives us visual information about an animal is worthwhile. We need close-ups of scars and distinctive markings. We need high quality photos of animals for which we have only indistinct photos. We need full-width views of animals for which we have only a portion of the animal depicted. We are happy to receive incomplete photos of mantas, so long as enough of the markings are revealed to permit later identification. We need dorsal views of animals for whom we have only ventral views, and vice versa. An animal seen in dorsal view by one photographer may be the same animal seen in ventral view by another photographer, and would be shown in the guide, erroneously, as two different animals.

Video is valuable for its continuity between dorsal and ventral views of a manta turning over, yet video resolution is not as high as slide resolution. The two together are the best; both sides of the animal can be verified by video, and high-resolution slides provide crisp detail of the markings.

Slides should be noted very carefully. We want to be certain we recognize the last slide of one animal and the first slide of the next. Be creative: indicate a new manta with the tip of a fin or a glove in the corner of the slide.

It's very important to note both date and location of your photographs. We are curious as to whether an individual animal makes seasonal appearances at various locations, whether the animals migrate. We are curious as to whether certain individuals remain together, possibly indicating a peer group based on age, sex, color, or other variables.

Divers in photographs obscure markings and make the task of identification more difficult. The same is true for time/date stamping. If a diver does not

overlap the animal we will remove the diver digitally. However, if you have a particularly great shot of the animal and it happens to have a diver on or near it, go ahead and send the photograph. Please photocopy and use the forms on the following pages to tell us about your observation and photography of these wonderful animals. Do contact us as soon as possible and we will be glad to send you information for safe mailing of your valuable work to our project.

How can you help?

As you can see, we need, and will always appreciate, many, many more photos, videos, counts, and slides of mantas from all parts of the world in order to begin to answer, and to answer well, any of the multitude of questions above. The most likely people to have or to obtain these photos are nature photographers, local fishermen, boat operators, recreational divers and divemasters in various locations around the world where mantas are to be found. We are systematically searching for these people via the web and by word-of-mouth; you can be a great asset here.

We deeply and sincerely appreciate every effort by each of the good-hearted folk who have assisted us to date, and eagerly await hearing from the rest of you!

Perhaps you have photographic material of these mantas, no matter how old, faint, or incomplete, and want to assist us in photo-identification for the purpose of global conservation of *Manta birostris*. Please do contact us as soon as possible, and we will be glad to send you information for safe mailing of your valuable work to our project.

From a photographer...

31 March 2014

Giant mantas (*Manta Birostris*) are one of the most spectacular animals with whom I have shared the seas.

Whenever they come close to me and look into my eyes I imagine they are trying to say to me something of crucial importance. I think they are asking me for help. For me, they are seas ambassadors, they represent the magnificence and the infinite beauty of marine life and the enormous risk they are in.

I feel an enormous sense of responsibility towards these beautiful animals and I have committed myself to help them in any way I can.

One of these ways is participating with **Pacific Manta Research Group**.

Taking some more seconds in photographing the mantas bellies and sending these images to either Karey Kumli or Robert Rubin allows their team to track that manta and insert it into their information system which could one day contribute to its protection and survival.

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Underwater Photographer
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We are very grateful to each and every one of you for contributing to this project. Without you, the photographers, this entire study would be only a dream...

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