



Instituto de
Conservación
de Ballenas



**Encuentro Regional
de
Especialistas en
Foto-identificación y
Conservación de la
Ballena Franca
Austral**

29 y 30 de septiembre - 2003 - Puerto Madryn

Auspiciado por:



PRINCIPAL DEBATES OF THE MEETING

Identification of Conservation Priorities for the Southern Right Whale on a Regional Level.

ARGENTINA

Problems identified

- The province of Chubut lacks a policy and a species management plan that guarantees the conservation of the right whale and its sustainability in the long run.
- There is demand driven pressure from touristic operators and tourism agencies towards the government to have more boats in the water; the decisions taken are directly influenced by touristic demand.
- There is a need to control the whale-watching activity in a more effective and intense manner.
- Interaction between kelp gulls and right whales is a specific problem of the population of Peninsula Valdés; no other regions are known where the harassment is so intense as in this area. The growth of the kelp gull population and thus, the increase in the harassment frequency to the whales is a direct result of the open-sky untreated waste in dumpsites.
- Due to an increase of ship traffic, fatal collisions with whales can potentially occur.
- Risk of entanglement in fishing gear and aquiculture nets.
- Potential negative impact of tourists diving with whales if the massive practice of the activity is permitted.
- Potential increase of pollution in the gulfs.

Conservation Priorities

- There is a concrete need to design a national southern right whale management plan sustainable in the long run, actively involving and supported by the corresponding authority.
- The need to create protected areas on a national and local level; where the areas that are critical for the conservation of the southern right whale are guaranteed.
- It is suggested that periodical technical meetings of this type should be held to evaluate these issues

BRAZIL

Problems identified

- The need to improve the training of whale watching tourist operators.
- There is not enough awareness in the general public regarding the educational value of this activity.
- Increase of man-whale interactions (timeserving tourism) as a result of the human population increase in the Brazilian coast, and the expansion towards areas which were inhabited by whales in the past.

CHILE

Problems identified

- Lack of a national state policy regarding conservation. It is very important to learn from the mistakes and experiences from other countries.

Conservation Priority

- Promote the potential of non-lethal use of whales in Chile, with the objective of changing the actual position of the government towards a national policy that promotes conservation, investigation and non lethal use of whales.

URUGUAY

Problems identified

- Habitat and coastal ecosystem alteration in Rocha and Maldonado.
- Badly-planned tourist infrastructure provoke a state of disequilibrium (seaboard geomorphology, waste- water, urban solid waste)
- The potential building of a deep-water harbor in a right whale area, imposing industrial type conditions.
- Lack of global document regarding the Uruguayan environmental problem.
- Fisheries: The use of trawls that destroy the bottom of the sea, and nets that may cause animal entanglement.
- Informal whale watching activity (whale-man interactions) has caused upset and threats in the region
- National State Policy: Uruguay is not considered a conservationist country. The government should apply conservationist policies like Argentina and Brazil.
- Lack of information regarding the impact of whale-watching activities. Poor information prevents the adequate determination of which areas should be protected.

Conservation Priorities

- It is necessary to regulate the proposed marine protected areas for the whales (law 17.234/00) and the Action Plan set up to minimize potential risks for the specie.

Carrying out these types of annual meetings will enable the formation of a working group, unifying efforts, and making more effective the conservation of cetaceans. We pretend to deliver a document with recommendations to those in charge of taking decisions in each of the countries.

HOW TO SHARE AND EXCHANGE RESULTS SO AS TO SET UP THE BASES FOR THE CONSERVATION OF RIGHT WHALES AT A REGIONAL LEVEL.

- **How to standardize research techniques to make results comparable: photographs from planes, boats and the shore, aerial surveys, census from the shore, and observations on behavior.**

Experts working with photo identification techniques discussed the way in which they do their surveys.

The most outstanding features of this discussion are the following:

In turbid sea areas, the identification of individuals with aerial photographs is a complex task. An alternative to this can be the use of helicopters, since they can remain in a same position (no need to be in constant movement as air planes), thus it can wait until the whale emerges from under the water to take the photo. Diego Rodriguez, based in Mar del Plata, (Buenos Aires province seafont) thinks that in turbid sea areas it is better to use the dorsal markings or pigmentation as an identification technique. He adds that boat identification is more suitable in this area. A catalog of whales has been created from the periodic identification censuses done by Rodriguez' group; 200 whales have been aerially identified; 120 from boats. They believe they take pictures of 20% to 40 % of the whales present in the area.

Alejandro Carribero expresses that even though there are some logistic aspects depending on each of the different research projects, what is most important is to discuss what is related to conservation, and if the efforts to carry out photo identification in each of the areas is or is not justified.

Karina Groch, explained that aerial surveys are done from helicopters in Brazil and though they are more expensive than small planes (600 US dollar per hour vs. 150 US dollars per hour), helicopters provide greater benefit. They don't have to fly in circles and as the seawater in the area is turbid, helicopters let them get closer to whales. They fly at 900 (aprox 275 meters) to 1000 (aprox 305 meters) feet high and when they spot a group of whales they lower down up to 300 feet (the legal limit) (aprox 90 meters) and wait till they get the best view to take the picture. If the animal has a negative reaction when the helicopter lowers down, they only do it twice and if they fail to take the picture they fly up to another group. 80% of the photos taken allow the identification of the animal. A survey is done once a month during the whale season in their working area.

Vicky Rowntree described the methodology used by the Whale Conservation Institute to carry out the aerial surveys. "When we look for whales in Peninsula Valdés, we fly at less than 200 meters high. When we spot a group, we lower down and fly in circles at 65 to 150 meters high, and so, we are able to take close-ups of each individual animal. If we want a picture to provide enough details on the callosity pattern, the whale has to cover about $\frac{3}{4}$ of the picture width. A picture of the whole body of a whale will show

the presence of a calf, if there's one. We use a 300 mm lens in a SLR camera and a 200 ASA film or quicker.

The pictures are taken at no less than 1/500sec. speed to compensate the plane vibrations. The photographer sits in a position so that he has the same view as the pilot, thus they can work together and direct the plane to the right position above the whales. The pilot directs the plane in such a way that when the plane flies in circles, it is set between the whale and the sun, and then, the picture is snapped. The pictures taken from the whale's front result in the best view of the back part of the bonnet. The pictures are generally taken when the whales come to the surface to breathe, but we start taking the picture before it surfaces the first time. Several pictures are taken of each animal (5-10) to help the recognition between callosity pattern, foam and reflection of the sun. After each photo sequence, the photographer takes a distinctive picture (for example, the horizon at 90° degrees, the shore, or a house, etc.) to distinguish one group of whales from another. An assistant takes notes and locates the groups in a map, registers the roll number, the letter assigned to each group, the number of animals in each group, the age class (calf, adult, juvenile, etc.), presence of calves, and unusual behaviors.

Guillermo Harris adds that when doing aerial surveys, safety is essential, and therefore only experienced photographers or researchers can give the right instructions to the pilot. According to his experience, he explains that the circles made above the whales have to be big and closed. The picture has to be taken when the animal is in front and the sun behind, as vertical as possible.

Carole Carlson said that what is most important is to evaluate the possibility of carrying out or not, photo-identification. It is not so important whether the pictures are taken from a helicopter or a plane but for her, the important issue is to establish standardized ways of doing it.

As a result of this panel, it is proposed that so as to standardize techniques of photo identification, the rules set in the Report of the *Workshop on Individual Recognition and the Estimation of Cetacean Population Parameters* must be followed (*International Whaling Commission, 2001, Rep. Int. Whal. Commn., Special Issue 12:3-40*).

- ***Development of a protocol to be able to compare Right Whale identification catalogues and to report second sightings of known (identified) individuals.***

Fulfilling one of the objectives of the meeting, the creation of a South American Right Whale Catalogue was proposed. At first, it will include identifying photographs of right whales from Argentina, Brazil, Chile and Uruguay. The creation of such a catalogue requires as one of its essentials that specialists agree on a methodology protocol, establishing the way in which the results of coincidences arising from comparisons are to be published. Once these issues are defined, the next step will be to determine the way to interact with other groups in Australia, South Africa, etc. The need to appoint a catalogue curator was also highlighted and it was proposed that this post be taken by different persons working in turns, but each one for a minimum amount of time. Alejandro Arias sketched a possible interrelation structure among the various parties involved. The method used by each of the specialists is determinant for making photographs comparable. The computer software developed by Lex Hiby and Phil Lovell, used by the Whale Conservation Institute for Argentina's right whales is also used by Brazil's IWC and by researchers from Australia. This is very important since it

will allow the comparison of the Catalogue of South American Right Whales with populations from other continents in the same hemisphere. Particularly within Argentina, where various projects are being carried out that involve photo-identification, and that use other methods to catalogue individuals.

To use a method that would allow catalogue comparison, Vicky proposed to use the software developed by Hiby-Lovell. She thus suggested each of the specialists should test it and comment in our next meeting (date to be set) on the problems that may take place while using it, in this way, to be able to adapt the program for everybody to use.

The Hiby-Lovell system was specially created for aerial photographs of right whales. Probably during the next year this system will incorporate new tools to make it possible to use callus pattern drawings made on the basis of photographs taken from boats and cliffs. These new tools will allow the drawings to be compared with bi-dimensional extracts made on the basis of aerial photographs. Thus, this program's application will include photographs taken from all platforms.

This software also makes it possible not to lose the individualities of the catalogues that are developed by each of the different research groups. Diego Rodriguez proposes to allow some time for the research groups to test the Hiby-Lovell system and to assess its applicability in view of each group's necessities. Alejandro Carribero adds that there are other programs available for identification.

Based on what was agreed by consensus, work must be focused on an agreement. All the people present agreed that it is already a very important step to be in a meeting like this and that it marks the beginning of cooperative work.

Independently of the identification tool to be used, it is necessary to decide on the steps to follow once coincidences between individuals from different catalogues are found. All of the assistants believe that it is essential to feel safe, and for that a regulation for using the catalogue and norms for publication must be established. An alternative to be evaluated is a "blind system" (in which only the photograph and its owner's contact information are included and interchanged).

Examples of protocols from other catalogues were analyzed in order to assess alternatives (see Carole Carlson's presentation). A common element in these catalogues is that they include no detailed information on the known individuals' sightings but only the photographs with the corresponding author's contact information.

As a conclusion, the participating organizations and individuals committed themselves to share the information resulting from photo-identification projects in order to favor the conservation of Southern Right Whales.

As part of a preliminary agreement, the assistants agreed to include the following clauses:

- 1- Sharing of right whale identifying photographs taken by all the groups present.
- 2- These photographs will not be used in general or scientific publications without a previous written authorization issued by the original contributor (copyright).
- 3- The "blind system" will be used to share photographs. This system involves the sharing of whale photographs but no other information (such as sighting date, site,

presence of calves, etc.) and data is provided to contact the group or person that contributed with this photograph.

As a first step, together with this preliminary agreement, the assistants committed themselves to exchange photographs of identified right whales. To this aim, the people and organizations present will distribute a CD with identifying photographs in jpg. format of the 100% of individuals that each of the research groups has identified so far. This material exchange is due to take place before March 15, 2004. The groups present have agreed to send to the *Instituto de Conservación de Ballenas* a copy of their corresponding catalogues in CD format. The *ICB* will make copies of these and will distribute them among the rest of the participants of this agreement.

In order to unify the scanned images format, the following specifications have been suggested:

When the images are scanned, it is important to adjust the scanner's resolution so that a detailed callosity pattern can be obtained. For example, the WCI uses a Nikon slide scanner which may be adjusted to obtain a rectangle (or box) of 680-pixel length and 480-pixel width scanned image. Once the slide has been previewed in the PC's screen, this rectangle is placed upon the whale's head on the image. The box size is adjusted to allow some margin of water on both sides of the eyebrows, in front the whale's rostrum and behind the post-blowholes islands. The inclusion of this margin of water in the scanned image is essential to be able to a later adjust of the grid used as a model. The rectangle's longest side should be paralleled to the whale's body length dimension. As a guide for those who have 1024x768 monitors, a 700-pixel length image conveys an adequate resolution for defining details in the callosity pattern. If the screen has a greater resolution, it is advisable to scan the images with a higher resolution in order for the screen not to display them in small size. The final image should occupy at least two thirds of the screen vertical size.

So that the research group or person to whom each photograph belongs may be identified, it was proposed that each group should take an identifying letter. This letter will be placed in front of each photographic archive's name, so that the group or person that contributed with each photograph in the unique catalogue may be identified.

B BRAZIL
A WCI/ICB
R SOUTH AFRICA
U URUGUAY
C CHILE
M ALEJANDRO ARIAS
E ECOCENTRO
P FPN
D MAR DEL PLATA
CETHUS (corresponding letter still to be determined)

CONSERVATION OF RIGHT WHALES IN SOUTH AMERICA, SPECIFIC ASPECTS AND COMMON GOALS, ACTIONS THAT ARE NEEDED.

With The objective of identifying conservation priorities for the southern right whale, Guillermo Harris proposed to do an exercise and to imagine the state of the species and its habitat in twenty years more in each of the countries represented. Actual

threats were identified, and tried to project them into the future. In spite of the lack of concrete evidence in many of the areas, the objective of this exercise was to analyze whether it is possible to develop a global program for the conservation of Right Whales in South America and to identify potential problems of conservation before they turn out to be concrete threats. The following chart was made as a result of this exercise.

After the exercise, some problems were identified as common to the entire region.

It was stated that if work was to be started for a conservation plan, it has no sense to do it on only one species; it should include all species in general.

It is essential to start going through the information available, and to establish what information is still missing, to be able to determine an activity plan.

| | Argentina | Uruguay | Chile | Brazil |
|---------------------------------------|---|---|--|--|
| Number of whales | 4000 ¿?? whales. Annual growth rate 6,8 % | 67 whales, and growing. | No information available | 300 animals along 400 kms of coast. |
| Ship traffic | Increasing | Increasing | Increasing | 6 ports, increasing |
| Aquiculture (fisheries, entanglement) | Increasing in Península Valdés | May be a problem in the future. | Increasing as of the X region. | Increase in handcraft fishing |
| Whale Watching Tourism | Increasing. Only regulated in Península Valdés. | More regulated, but with a greater whale watching pressure. At the moment 7 operators are registered, but only one is actively working. | Does not have whale watching industry. | 3 operators and the activity is increasing. |
| Garbage dumps (gull harassment) | Increasing | Increase in the population of gulls. | No information available | There are some registers of attacks. |
| Pollution: Effluents Noise | Increasing | Río de la Plata Noise Pollution increasing | Arauco Gulf (VIII region), historical area of right whales, today is a highly polluted area II Region: mining | South east area: noise and effluent pollution, and in the northeast, effluent pollution. |
| Oil: exploration and exploitation | Increasing, transporte polo petroquímica en pcia Buenos Aires | Chronic oil spills | Very high in the XII region | Oil exploration increasing. |
| Diving with whales | There is pressure from certain sectors to begin the commercial diving with cetaceans. | At the moment, forbidden, with pressure for its implementation. | No | Forbidden |
| National State Policy | Historically conservationist in the IWC | Erratic | Favoring extractive use | Conservationist |

Conclusions

- **The participants agreed to exchange identification photographs of right whales cataloged by each of the groups, and the bases have been set for the possible creation of a regional catalogue of South American Right Whales, in the future.**

- The main objective of the Meeting was accomplished, and it marks the beginning of cooperative work for the conservation of whales in South America.
- An agreement will be signed to set the bases to use the information that results from comparisons between the whales of the different catalogs.
- The comparison of photographs of right whales that were identified in Argentina, Brazil, Uruguay and Chile, will allow us have a deeper knowledge about the spatial temporal distribution of the species at a regional level.
- The comparison of photographs is an essential tool to promote the conservation, since it provides evidence on the problems of conservation, threats, and the general state of the populations.
- The will to share data and to consider that we are all part of a bioregion, is a success in itself. Isolated individual work in different countries is of little use.
- The consolidation as a regional group strengthens the conservationist position of South America in the International Whaling Commission.
- Everything that was discussed in the Meeting is part of a regional effort about the way we would like the area to be preserved.
- Human and financial resources will play an important role in the practical application of this regional effort to create a unique catalog for South American Right Whales.
- It is essential to continue with this type of regional meetings, since they allow to determine the information available, and to identify actions which should be prioritized.
- The debates marked the need to work in education and awareness activities, for tourists and for tourist operators.
- Projects studying the impact of the whale watching activity and noise pollution must be started and/or continued.