

Gesellschaft zur Rettung der Delphine (GRD)  
(*Society for Dolphin Conservation, Germany*)

## **DELPHINPOST**

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*Translation: Ulrike Kirsch (except GRD Project Peru)*

### GRD SPERM WHALE RESEARCH CENTER ON DOMINICA

*Although a beginning was made last year in March (see Delphinpost issue 3/04), the really exciting and official part did not take place until April 2005: the inauguration and opening of the Sperm Whale Research Center founded by GRD project manager Andrea Steffen and her husband Wilfried on the Caribbean island of Dominica—a ceremony including 80 invited guests and the national TV.*

This event was featured several times in the TV evening news, thus reaching the major part of the islanders. The effect of this in terms of whale conservation on Dominica cannot be appreciated enough. Dominica is a small Third World nation. Owing to its volcanic origin the island is characterized by high, steep mountains and tropical rainforest. Farming is possible only to a limited extent. The absence of beaches and a poorly developed tourism infrastructure makes the island one of the poorest countries in the Caribbean. So it came as no surprise that its government yielded to the enticements offered by Japan's whaling lobby—in the form of substantial financial aid—for joining the International Whaling Commission (IWC) and voting in favor of whaling. The prevailing attitude among the population with regard to whaling has been one of indifference so far because the great majority of the islanders are not aware that Dominica's waters are home to sperm whales. An attempt to discuss the issue with the minister in charge on the 2003 IWC meeting in Berlin was turned down flat for being an unwelcome interference in the country's domestic matters. So, there seems to be only one way to have Dominica withdraw its pro-whaling vote: pressure must come from the population.

Commercial whale watching has been known here for only a few years. Rather modest in the beginning, sperm whale watching nowadays even attracts cruise ships, and in April we welcomed more than 130 guests from the AIDA at our presentation. A cruise ship calling at this island because of the whales that can be found in its waters is of enormous economic importance to the population. A resumption of whaling, by contrast, would mean a quick end to the approximately 30 sperm whales living off the island, thus destroying for good the tender plant of tourism that has just started to grow.

The research center is to help stop this fatal development; sperm whales and other marine mammals living in Dominican waters are to be protected in the long term. Today, there are boards and posters informing on the origin, biology, social life, and migration of sperm whales and, as a main attraction, the fully reconstructed sperm whale skeleton, the only one in the entire Caribbean. A comprehensive fluke database, for recognizing individuals, is being established. This will be a useful tool in monitoring population trends. It is our hope that these preparations will attract researchers and whale watchers to Dominica who can then build on these results. We quickly realized just how welcome such an idea is when a team of researchers headed by Hal Whitehead, an internationally renowned whale researcher, undertook a three-month cruise throughout the island's waters aboard the research vessel Balaena (Dalhousie University, Halifax). We enjoyed several lively exchanges of experience and information and were then able to determine that five sperm whale families live in this area. There is a sixth group which, however, seems to be a so-called bachelor school, i.e. a group of young sperm whale bulls which do not yet migrate.

We have already received invitations for performing more presentations when we visit Dominica the next time, including one from the biggest school on the island. This will again be featured by TV, thus helping raise awareness about the sperm whales and their importance to the island, so that the government will feel the pressure from the population. It is still a long way to go, but if Dominica abandoned its pro-whaling attitude this would be an as yet unique achievement and success for the whales.

*Andrea and Wilfried Steffen*

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## **GRD PROJECT PERU: THE RESIDENT DOLPHINS OF PARACAS BAY**

Most people visiting the Pisco-Paracas area, in southern Peru, take the tour to the Ballestas Islands, an extraordinary example of the rich biodiversity sustained by the cold Humboldt Current. The islands, located some 20 miles offshore, are plenty of life, with hundreds of sea lions and thousand of marine birds, which spend most of their lives in or around the islands. But one of the most exciting experiences just after departure from the El Chaco pier located at the Paracas Bay is the encounter with groups of dolphins. Bottlenose dolphins (*Tursiops truncatus*) are frequently milling around in the bay, becoming for a while the center of attention for the visitors in the area. However, they are not just bottlenose dolphins. They are members of the “A Group” of resident dolphins that have been under study by ACOREMA since 2004, with the support of GRD.

How can we tell they are resident? Through observation of its dorsal fin we can tell apart each dolphin. The natural marks (nicks, scars, discoloration, etc.) are used to recognize each individual and allow us to know some aspects of their biology. For example, the distribution or range of the A Group has been established at about 55 km along the coast between Paracas Bay and the Chincha province, because “marked” dolphins have been observed at both locations during the continued surveys carried out in the area. Another aspect of the life history of the A Group that we know is that their reproductive season is the austral summer, this derived from direct observations of newborns and calves precisely during that season. Residency of the dolphins is established through successive observations of individuals in the area, and that is what we do. Going out in a small boat we collect information about the A Group and take several pictures, building a catalogue with data on each individual. If we give them names, then it is easier to work, as we become familiar with the features exhibited by each named dolphin more than if only numbers are used. Thus, the dolphins of the A Groups are being named, trying to give them a name that matches somehow with a specific feature: “Queen” is a dolphin with three small knobs in the tip of the dorsal fin that looks as a crown. We know that she is a female because last February she was observed with a very small calf. “Corky II” is an individual with a hump in the anterior part of the body; “Vitali” is a dolphin lacking a large part of the tail fluke, but it makes a great effort to keep up with the group, being always supported by other members. “Silver” has a shiny swath on both sides of the dorsal fin.

As we know more about these dolphins, we also learn that they confront several conservation problems, as the area where they live is influenced by human activities such as those related to fisheries (incidental entanglement in fishing nets, direct capture, dynamite fishing, decline of fish stocks that are dolphins’ main prey), industrial development (fish meal factories along the shore, oil and gas factories installed in the area) and increasing pollution. All these problems account for a reduction in the number of dolphins of the A Group, estimated at 100 to 130 animals in the early 1990s. The last survey conducted to estimate the size of the group yielded only between 70 and 80 animals. We all must make efforts to help protect these dolphins and their habitat, follow up their situation in light of all the threats they face, and get more people involved in conservation actions to keep the encounters with the A Group as the most inspiring experience in the Paracas Bay.

*Julio C. Reyes - ACOREMA*

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## **TEAMWORK IN THE MODERN HUNT FOR PREY - SUCCESSFUL COOPERATION BETWEEN DOLPHINS AND FISHERMEN**

When hunting, dolphins often drive their prey towards natural barriers, such as shallow waters, reefs, or rocky coasts, thus optimizing their hunting success, while saving energy. What is new is that their hunting strategies also include fishing nets. For years, the crew of the Green Ocean research vessel “MS Thales”, a GRD partner for marine field courses, has observed groups of striped dolphins of varying sizes that frequent different hunting grounds off the Tuscany coast near Livorno (Leghorn). They have noticed that two dolphin groups have adjusted their behavior to that of fishermen over a period of three years. But also some of the fishermen have learned something new: observing the striped dolphins’ behavior and acting accordingly allows them to catch more fish.

From March through June, Mediterranean mackerel come up in shoals to hunt for crustaceans and zooplankton in the sedimentary basins of the Arno near Livorno harbor. For fishermen this is an anxiously awaited event, and has been for generations, and the dolphins will not miss it either. In 2001, the “MS Thales” crew suddenly observed a remarkable change in the hunting methods. The fishermen and two groups of striped dolphins, which share the same fishing ground, meet at about the same time in the fishing grounds. From a short distance one of the older male dolphins watches the fishermen setting their nets, which are anchored to the bottom and reach lengths of about 50 meters and heights of between 2 and 4 meters, while the rest of the group waits at a distance.

Once the net has been set the “scout” gets nervous and starts calling or leaping to gather the group. An older female, in most cases a mother with her own offspring from the previous year, takes over the “nursery school” with all the young ones. The remaining animals now move towards the nets all together, break up into three smaller groups at a distance of about 2 sea miles and herd the shoals of mackerel towards the nets, as has been confirmed by underwater observations. The fish back away from the obstacle and change over into a narrow stationary spiral movement. The dolphins can now comfortably catch mackerel by mackerel, taking turns at hunting until they all have satisfied their hunger. During the spiral movement a large part of the fish shoal becomes meshed. At the end of the hunt, the dolphins may also “pluck” some mackerel from the net.

Some fishermen have already adjusted to the dolphins’ new hunting strategy, observing the animals’ behavior before setting their nets to roughly determine the whereabouts of the mackerel shoals. They then leave, moving away no more than a few sea miles, and return to nets filled with plenty of fish early enough before they are emptied by the dolphins. Without the dolphins’ “drive hunt” the catch would have been much smaller.

Other fishermen, by contrast, set their nets arbitrarily, leave the area and do not return until much later. Evidently they are rather annoyed about the nearly empty nets, blaming the allegedly voracious predator that steals “their” fish—and thus the fruits of their hard work—even if no dolphins were around and they merely chose an unsuitable location for setting their nets.

*Robert Groitl, Dipl.E.D. oceanograph*

### **Current measurements help to protect dolphins:**

The study of the dolphins’ food supply requires precise knowledge on the local currents in the habitat of the different groups of dolphins. These measured data are collected using sonar buoys and passive drifting buoys, which, e.g., are also employed in the GRD marine field courses aboard the research vessel “MS Thales”. A drifting buoy provided with a drift anchor is dropped into the sea and observed for a period of several days. Every movement of the buoy appears on the radar of our research vessel. The onboard computer transfers the data thus collected onto current maps. Good knowledge about currents in marine

areas allows reliable conclusions to be drawn about migration and availability of food sources for dolphins. We would like to thank GRD for providing the buoy.

*R. Groitl, Green Ocean*