

THE YEAR OF THE WHALE: EXTRAORDINARY OCCURRENCE OF BRYDE'S WHALES OFF LA GOMERA (CANARY ISLANDS)



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INTRODUCTION

The waters off La Gomera (Canary Islands) are known for an extraordinary high number of cetacean species (Ritter, 2003). With more than 20 species identified, a regularly surveyed area of approximately 100 nm² South and Southwest of the island represents one of the highest species diversities in Europe. However, these waters predominantly are inhabited by small and medium sized toothed whales, such as delphinids, short-finned pilot whales, beaked whales and others. Baleen whales are seen regularly but not frequent, and mostly during periods which correspond to known migratory cycles. This was different in 2005, when Bryde's whales (*Balaenoptera edeni*, Figure 1) were constantly seen from springtime through autumn.

METHODS

As part of an ongoing research project, sighting data (species, date, time, group size, presence of juveniles/calves, behavioural state) were collected on a regular basis during whale watching trips, which are conducted year round. Bryde's whales were identified according to body size, colouration and the presence of three ridges on top of the upper jaw, which are distinctive for this species.

RESULTS

Bryde's whales were encountered 118 times between 31 March and 17 November. Thus, this species was the second most frequent cetacean seen off La Gomera during this period in 2005 (38% of all cetacean sightings). During August and September, it was the most frequently seen member of the cetacean community, representing up to 60 % of all sightings. Sighting numbers were constantly high from April through October, with the exception of June (see Figure 2). All sightings were made within 9.3 km (5 nm) distance from the coast.

Group size ranged from 1 to 6 (n=112, mean=1.85, SD=1.08), while most sightings were made with single animals (n=54). Pairs were seen 34 times, groups of three animals 17 times. Groups of three animals or more were usually widely spread, while cow-juvenile and cow-calf and pairs, which were seen 7 and 2 times, respectively, typically swam close together.

Bryde's whales were regularly seen together with other cetacean species, mostly Atlantic spotted dolphins (*Stenella frontalis*, n=18), sometimes both Atlantic spotted dolphins and bottlenose dolphins (*Tursiops truncatus*, n=2), and once with common dolphins (*Delphinus delphis*). During another sighting, bottlenose dolphins together with pilot whales (*Globicephala macrorhynchus*) were present.

Behaviours observed included *travel*, *milling* and *feeding* close to the surface. Feeding was indicated by the presence of fish and/or feeding flocks of seabirds, and whales showing repeated changes in swimming direction.

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DISCUSSION

Bryde's whales are distributed worldwide in warm temperate and tropical waters (Mann *et al.*, 2000). They are the only member of the balaenopterid family residing in lower latitudes year round. They are known to show site fidelity and several resident populations have been identified (Lockyer, 1990). During the past, Bryde's whales were seen irregularly off La Gomera. The observation of feeding behaviours of Bryde's whales in 2005 indicates that these whales spent the greater part of the year in this area because they found enough fish to feed on, which is their predominant prey (Evans, 1987). Feeding aggregations have been observed in other areas, too (Evans, 1987). In a comparative study conducted in the Pacific Ocean off Mexico, Bryde's whales moved less between feeding locations than fin whales. It was argued, that this species might rely on the more predictable, albeit patchy abundance of food sources than other balenopterids (Tershy, 1992, cited in Boran *et al.* 2001). The Bryde's whales seen off La Gomera probably had become aware of such favourable conditions. By its ability to exploit local food sources year round this species has freed itself from the constraints of migration (Clapham, 2000). The presence of calves and juveniles during summer months concurs with the fact, that this species has a protracted (and in some populations year round) breeding season (Evans, 1987).

The extraordinary occurrence of Bryde's whales suggests that 2005 was unusual in terms of oceanographic conditions and fish abundance. The reduced presence during June could be a consequence of the whales staying more offshore, or that they explored other areas within the Canarian archipelago. We hypothesize that this species explores (and exploits) new areas as feeding grounds in the subtropical NE Atlantic Ocean, possibly after a reduction of available food due to overfishing.

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