A Puzzling Calf: First record of an association between a presumed *Grampus griseus* calf and an adult *Tursiops truncatus* in the Mediterranean Sea

Natàlia Amigó Chaparro
nataliaamigo@submon.org

Amigó N.[1], Farlete A.A.[1], San Roman D. [1], Chicote C.A.[1]
(1) SUBMON - Conservation, study and awareness of the marine environment, Barcelona, Spain.

INTRODUCTION

Risso's dolphins (*Grampus griseus*) and common bottlenose dolphins (*Tursiops truncatus*) are generally considered species with distinct habitat preferences in the Mediterranean Sea. Common bottlenose dolphins typically occupy coastal waters and frequently interact with fishing activities, whereas Risso's dolphins are more commonly found in deeper offshore environments. Consequently, encounters between the two species are considered rare, and no mixed groups or hybrid individuals have been confirmed to date in the Mediterranean basin.

METHODOLOGY

Between 2017 and 2025, dedicated surveys (150 days) were conducted along the northern Catalan coast (NE Iberian Peninsula) using a 7 m RIB, focusing on the continental shelf (≤200 m).

For each sighting, date, time, location, and group composition were recorded.

Photo-identification was carried out using DSLR and mirrorless cameras (300–500 mm), and ~5-minute behavioural videos were recorded.

RESULTS

On 3 June 2025 an unusual sighting was recorded on the continental shelf off the Catalan coast (Figure 1) during a regular vessel survey.

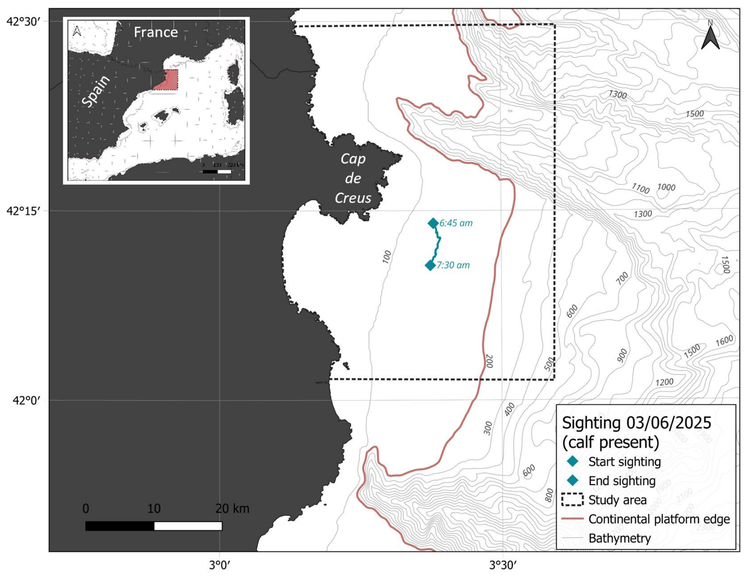

Figure 1. Map showing the location of the sighting.

Sighting:
A group of nine adult bottlenose dolphins, two juveniles and one calf following a bottom trawler operating at a depth of 118 m (Figure 2).

Rarity of the sighting: The calf swimming in an echelon position alongside an adult bottlenose dolphin, exhibited morphological traits characteristic of Risso's dolphins (Figure 3).

These traits included features typical of Risso's dolphins' calves:

- Relatively large, rounded head;
- The absence of a distinct rostrum;
- Light grey pigmentation;
- Dark grey cape extending just below the eye and slightly below the dorsal fin;
- Pale grey streak along the body
- Clear v-shaped crease.

Based on these diagnostic external characteristics, the calf was identified as a **presumed Risso's dolphin**, as the species identity could not be confirmed genetically.

Other features:

- No noticeable rake marks or scars
- Foetal lines were obvious, indicating a few-week-old calf.

- No aggressive or avoidance behaviours were observed.
- Bottlenose dolphins are frequently observed in the area.
- Risso's dolphins have not been recorded in the area throughout the study period.

Figure 2. Screenshots from a behavioural video showing the reported mother/calf pair, swimming near a bottlenose dolphin mother/juvenile pair behind a trawling vessel during the sighting.

Details regarding the interaction, including the duration of their association and how it began or ended, remain unknown since neither the adult nor the calf was seen in the area during previous or subsequent surveys.

Figure 3. Surfacing sequence of the bottlenose dolphin TTRU508 with the presumed Risso's dolphin calf. .

DISCUSION

Interpretation 1: Interspecific Alloparental Care

The adult bottlenose may be displaying alloparental care toward a Risso's dolphin calf.

- Calf morphology consistent with **Risso's dolphin**
- Interspecific caregiving is **rare but documented** in cetaceans
- Bottlenose dolphins **known to alloparent other species**
- **No previous reports** of care between bottlenose and Risso's dolphins
- Possible drivers: Misdirected maternal care (e.g., nulliparous or post-calf loss) / Practice of maternal skills / General attraction to infants
- **Drivers remain unclear** in this case

Interpretation 2: Hybridisation

- Hybridisation between bottlenose and Risso's dolphins is **rare but confirmed** (wild & captivity)
- Hybrids typically show **intermediate morphology**
- Observed **calf does not display clear hybrid traits**
- Lack of genetic data means **hybridisation cannot be ruled out**

Ecological interpretation

- This observation likely reflects an interaction caused by spatial overlap between the species, whether brief or prolonged.
- This overlap may reflect ecological responses to environmental variability, shifts in distribution, population dynamics, or anthropogenic pressures.

Publication

Evidence favours **interspecific alloparental care**, although **hybridisation cannot be excluded** due to the absence of genetic confirmation

The sighting reported here represents the **first known evidence of either interspecific alloparental care between these species worldwide or hybridisation between bottlenose and Risso's dolphins in the Mediterranean Sea.**

Beyond its novelty, this observation provides insight into the social flexibility of delphinids and suggests a degree of interspecific compatibility between the two species.

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