

H06

## BEHAVIOURAL RESPONSES OF RISSO'S DOLPHIN, *GRAMPUS GRISEUS*, TO REMOTE BIOPSY SAMPLING.

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Biopsy sampling from free-ranging cetaceans is a widespread method used in various biological studies. Since this is an intrusive research technique, it's important to determine its impact.

We examined the short-term behavioural reactions of Risso's dolphins, *Grampus griseus* (2.6-4m in length), off Pico Island, to remote biopsy sampling. Biopsies were conducted over a consecutive two year period using a crossbow with Finn Larsen bolts and tips. Sampling followed a number of precautionary rules, including taking samples only in calm seas, when animals were travelling; no more than 1-4 shots per group; and females with nursing calves were not exposed to sampling. Behavioural responses were analysed by visual observation using two scales of behavioural reactions: i) the reaction of the targeted individual, and ii) the reaction of the focal group to which the targeted individual belonged. We defined five categories of intensity of behavioural response (none, low, medium, high, very high) and five types of display response (quick dive, QD; diving & leaving, D&L; jumping, J; tail slapping, TS; and speeding away at surface, SS). A total of 189 shots were made (115 hits, 74 miss) during 61 survey days. Tissue was obtained in 83% of the hits. No significant differences were found between hits and misses in behavioural responses or types of display (Kruskal Wallis test). In 9% of the cases there was no visible reaction, while most (48%) behavioural responses were of low intensity. The frequencies of the display responses differed significantly from each other (chi-squared test). The types QD and D&L constituted 79% of the responses. Group reaction was observed during 1/5 of the shots, (main behaviour D&L-51%). Although biopsy sampling is an invasive method, our results indicate that if basic precaution rules are followed low intensity behavioural responses can be expected for half of the time.