



## Can the junk food hypothesis be applied to harbour porpoises (*Phocoena phocoena*) in Dutch waters ?

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Porpoise distribution in the North Sea has shifted southwards in recent years. Apparently, many animals left areas that are rich in sandeels *Ammodytes sp.* and moved to an area where much leaner gobies *Pomatoschistus sp.* and whiting *Merlangius merlangus* are their main prey. This shift in range, and presumably in diet, does not seem to have affected the body condition of all porpoises in the south. Body condition in stranded specimen found in the Netherlands varies, from very good to very poor. Still, the most likely cause of death of some 15% of these stranded animals is starvation. The question thus arises whether these animals could not find sufficient food or if their food was of insufficient quality. Stomachs of emaciated animals are not necessarily empty. In fact, stomachs of emaciated porpoises were often found to contain food remains. This study examines these remains and compares the diet of emaciated porpoises to that of healthy specimen. We hypothesise that porpoises might starve by eating junk food: other, leaner prey than they should be taking in order to maintain a good body condition. Results show that there is a highly significant difference in diet between animals in a good body condition and animals in a bad body condition (PERMANVOVA;  $df = 1$ ;  $p = 0.001$ ). Co-variables that show significance in relation to total prey mass per individual are season (PERMANVOVA;  $df = 3$ ;  $p = 0.001$ ) and age (PERMANVOVA;  $df = 2$ ;  $p = 0.001$ ). Our findings can provide that animals in a bad body condition tend to feed on leaner fish than the individuals in a good body condition.