

**DISCRETE POD-SPECIFIC CALL REPERTOIRES AMONG SHORT-FINNED
PILOT WHALES (*GLOBICEPHALA MACRORHYNCHUS*) OFF THE SW COAST
OF TENERIFE, CANARY ISLANDS.**

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Due to limitation of underwater visibility cetaceans use acoustic signals for maintaining contact between group members. Among delphinids two forms of contact calls have been reported: signature-whistles in fission-fusion societies and discrete group-specific call repertoires in matrilinear stable kinship groups. Short-finned pilot whales are supposed to form matrilinear kinship groups, however, their acoustic behavior is still poorly investigated. This study was initiated to examine their acoustic repertoire in general, to correlate their acoustic activity with surface behavior and to investigate possible group-specific repertoires.

During a total of 55 hours of observation 13 hours of audio recordings were made. The vocalizations were spectrographically analysed. During acoustic recordings the numbers of individuals were counted and the surface behavior was sampled. Finally, four recorded groups were individually identified and acoustically compared.

Next to echolocation sounds and grunts the vocal repertoire consists of calls ranging in frequency generally from 280 Hz to 23,44 kHz. 86% of these calls (n = 389) were each shown more than once and up to 36 times and had a range in length from 90 ms to 1.560 ms (mean = 820 ms) with a mean maximum frequency of 10.450 Hz and a mean minimum frequency of 2.380 Hz. 14% (n = 61) were only heard once and had a range in length from 200 ms to 4.300 ms (mean = 1.030 ms) with a mean maximum frequency of 8.290 Hz and a mean minimum frequency of 2.950 Hz. The occurrence of these discrete and variable calls differed in correlation with the surface activity: travel (n = 2; discrete calls per individual and 3 minutes = 0,2 / variable calls per individual and 3 minutes = 0), travel/rest (3; 0,4 / 0,1), rest (3; 1,1 / 0,2), dive (1; 0,2 / 0,1), omnidirectional (21; 1,2 / 0,1) and socialize (4; 0,5 / 0,3). Comparisons of call repertoires between the pods A, B, C, and D (15, 17, 12 and 30 individuals) were made. Each pod showed an own discrete call repertoire (pod A = 12, B = 4, C = 14 and D = 11 calls) indicating that discrete calls serve as contact calls among group members.

Citation:

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