

Thick-billed murres feed on fish associated with jellyfish in the Bering Sea

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Predator-prey interactions are difficult to observe underwater due to technological limitations, especially for wide-ranging marine predators such as seabirds. Here, we present novel observations on seabird-fish-jellyfish associations from video footages obtained from bird-borne data loggers. By attaching video loggers together with time-depth-accelerometers, we obtained video and behavioural data from 4 thick-billed murres (*Uria lomvia*) rearing chicks on St. George Island, southeaster Bering Sea. Video data lasted 8 and half hours and covered 98 dives in total (dive depth: 48.6 – 84.6 m). Video footages were light enough to examine possible objects only for 37.4 % of dive time on average, and all the periods with enough light were descent and ascent phases. The birds kept regular wing propelling and did not feed during the descent phase. In contrast, during the ascent phase, the birds fed on small fish in 80 dives (83.3%), with 1-7 fish per ascent (196 times in total). Jellyfishes were also observed during the ascent phase (3.5 ± 2.2 jellyfish per dive), and 17.3 % of 196 feeding events occurred near the tentacles of jellyfish. A previous study hypothesized that, from observations based on submersibles, small pelagic fishes often associate with tentacles of large jellyfish, possibly to avoid predators in the Bering Sea. On contrary to this hypothesis, our results suggest that thick-billed murres might feed efficiently on high-density patches of small pelagic fish associated with jellyfish during the ascent phases of their dives.

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