Near-surface foraging of Rhinoceros auklets as revealed by depth and video data loggers

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Rhinoceros auklets (*Cerorhinca monocerata*) were studied at Teuri Island, Hokkaido, Japan during the breeding season of 2018. The midday diving behaviour and prey capture rates of four individuals were investigated using temperature-depth and video data loggers attached on the back of the birds. Using depth and video loggers simultaneously allows to correlate the actual prey capture events and diving depth profiles to better understand foraging activity in the water column. From ten hours of video footage recorded in total, birds spent five hours underwater and showed intensive feeding behaviour. On average each bird caught 277±92 (mean±SD) prey items, with 1.18±0.32 prey items per dive, but sometimes as many as ten in a single dive. Most prey caught was a juvenile sand lance (*Ammodytes personatus)* (89.8%) that was mainly taken during the ascending phase of the dive. Video data revealed that the majority of sand lance was caught near or at the surface, often at the last moment before surfacing. These preliminary results from video loggers indicate that a substantial amount of Rhinoceros auklet prey is captured at very shallow depths, which usually are considered as unreliable near-surface "noise" in the depth logger data (0.5-2 metres) and are excluded from diving/feeding behaviour analysis. At least during the period when sand lance is common in waters around Hokkaido, prey caught during shallow midday dives may contribute substantially to the Rhinoceros auklet diet.