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SEABIRDS SAMPLE PLASTIC POLLUTION: BONIN PETRELS (*PTERODROMA HYPOLEUCA*)
AS BIOINDICATORS OF PLASTIC IN THE NORTH PACIFIC

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Bonin Petrels (*Pterodroma hypoleuca*) have been characterized by high incidence of marine plastic ingestion with 75 – 100% of sampled individuals containing debris. We contend that Bonin Petrels are ideal bioindicators of pelagic plastic pollution for the Northwestern Hawaiian Islands due to their breeding phenology, stomach anatomy, and foraging ecology. Our goal was to create baseline data for this species, develop necropsy protocol for the future and gain insight to the types of plastic consumed. Necropsies were performed on 84 Bonin Petrel specimen collected from Midway Atoll to characterize body condition and plastic ingestion. Samples remained separate by age class and stomach chambers. Plastic samples were categorized by type, size, and polymer composition. 95% of hatch-year birds had ingested plastic (n=42); 83% had plastic in the gizzard and 60% had plastic in the proventriculus. Among this sample, 79% of the birds ingested fragments with an average mass of 0.0099 ± 0.0157 g. 88% of the birds ingested line with an average mass of 0.0042 ± 0.0078 g. 93% of after-hatch-year birds had ingested plastic (n=42), 93% had plastic in the gizzard and 19% had plastic in the proventriculus. Among this sample, 69% of the birds ingested fragments with an average mass of 0.0086 ± 0.0146 g. 83% of these birds ingested line with an average mass of 0.0025 ± 0.0019 g. Fragments and line make up the majority of ingested plastic types, giving insight into the types of plastic floating in their foraging region. Overall, there was more plastic in the gizzard than the proventriculus as well as more plastic in hatch-year birds compared to after-hatch-year birds, highlighting need to consider these factors separately to avoid bias.