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Poster Presentation

PLASTIC INGESTION BY TERN ISLAND SEABIRDS: A COMMUNITY-WIDE PERSPECTIVE

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We used standardized necropsies to assess the current status of plastic ingestion (incidence and loads) by seabirds breeding at French Frigate Shoals (FFS), Northwestern Hawaiian Islands (NWHI), and to investigate impacts of this pollution on focal species with high incidence rates. Between 2006 and 2013, we opportunistically sampled 350 specimens of 16 species: 233 specimens (66.6%) and 11 species (68.7%) had ingested plastic. While only one species represented a new record of plastic ingestion (the Brown Booby *Sula leucogaster*), we also documented this pollution in 10 other species, where plastic ingestion had been previously documented previously (1980s – 1990s). These species were very diverse, belonging to 7 families and 4 orders, and representing 5 distinct feeding guilds: albatrosses, tuna birds, nocturnal petrels, plunge divers and frigatebirds. Plastic ingestion also varied greatly within species, when individuals of different age classes were compared. In particular, chicks had significantly higher incidence rates and loads of ingested plastic, than conspecific adults. The highest incidence rate (100 %) was observed in 60 Tristram's Storm-petrel (*Oceanodroma tristrami*) chicks and 5 Bonin Petrel (*Pterodroma hypoleuca*) chicks. Laysan (*Phoebastria immutabilis*) and Black-footed (*Phoebastria nigripes*) Albatross also had high incidence rates (> 50% in adults, > 90% in chicks). Together, these data confirm that plastic ingestion is pervasive and affects a wide range of species breeding in Tern Island. Nevertheless, field-based observations of chicks of two focal species with high levels of ingestion (Tristram Storm-petrel, Laysan Albatross) did not reveal significant correlations between their body condition and growth rates and their plastic loads sampled via necropsy.

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