Bill mutilations in albatrosses and petrels: a call for best practices mitigating sub-lethal effects of bycatch on seabirds


**SUMMARY**

Sub-lethal effects of fisheries bycatch on seabirds, including injuries, are virtually undocumented, which can complicate both the detection of population effects and linking them to bycatch. Here, we present the first synthesis of albatrosses and petrels recorded with bill mutilations. From 1999 to 2019, 39 albatrosses and petrels of seven species were recorded mutilated, of which 33 (85%) were documented with photographs. Of the total, 29 birds were recorded alive (74%), both at-sea (n = 24, 61%) and stranded on-shore (n = 5, 13%), and 10 (26%) were found dead on the beach. All records of albatrosses and petrels with bill mutilations came from the southwestern Atlantic Ocean. Most injuries (95%) were flat coronal cuts perpendicular to the bill length and the degree of mutilations varied from 3% to 100% of the bill removed. The most parsimonious explanation for the mutilations is that mandibles were cut using a blade during hook-removal process of birds hooked live, which were likely caught during pelagic or demersal longline hauling or by other “hook and line” gear. These suggest that poor handling of live birds in hook and line fisheries in the southwestern Atlantic poses a cryptic and cumulative threat to threatened albatrosses and petrels already impacted by direct fishery mortality in this region. Concerted and coordinated actions by Regional Fishery Management Organisations and national authorities are urgently needed, including exhaustive and wide scale training for fisherman on the best practices mitigating the bycatch of live birds and safely hook removal and handling.