**Appendix A**

**Methodology for estimating the degree of mutilation as a percentage of bill linear length**

From photographs, when available, we estimated the degree of mutilation as a percentage of bill linear length (the straight-line distance from the beginning of the gape along the commissure of the two mandibles to the tip of the bill), based on the known culmen length for each species, using the software ImageJ (Schneider et al., 2012).

First, each photo was scaled based on the known mean culmen length (CL; the distance from the base of the feathers at the top of the bill to the bill tip) for each species obtained from the bibliography (**Figure A1, Table A1**). Subsequently, base-nostril length (BNL; the distance along the nasolabial groove from the base of the feathers to the beginning of the naricorn) and bill actual length (BAL; the distance along the commissure from the gape to the distal end of the damaged mandible(s)) were estimated (**Figure A1**). When both mandibles were missing, BAL was calculated based on the BNL. Then, the degree of mutilation was estimated as (BAL/BLL) × 100.



**Figure A1.** Measurements used to quantify the degree of mutilation, as a percentage of bill linear length. Each photo was scaled based on the known mean value of culmen length (CL) for each species (Table 1). Subsequently, bill linear length (BLL), base-nostril length (BNL) and bill actual length (BAL) were estimated. When both mandibles were missing, BAL was calculated based on the BNL. Photo: Julián Bastida.

**Table A1.** Morphometric measures used to estimate the degree of mutilation for each species. Mean culmen length (CL) was obtained from the bibliography, while bill linear length (BLL) and base-nostril length (BNL) were estimated with the software ImageJ. Threat status according to IUCN (2019): EN – Endangered, VU – Vulnerable, LC – Least Concern.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Species (threat status) | CL | BLL | BNL | Reference |
| Northern royal albatross (EN) | 161.0 | 139.3 |  | Jiménez et al., 2012 |
| Southern royal albatross (VU) | 173.0 | 148.7 |  | Jiménez et al., 2012 |
| Black-browed albatross (LC) | 118.0 | 99.2 | 12.2 | Jiménez et al., 2012 |
| Atlantic yellow-nosed albatross (EN) | 116.0 | 99.0 |  | Jiménez et al., 2012 |
| Southern giant petrel (LC) | 81.0 | 86.3 |  | Jiménez et al., 2012 |
| Spectacled petrel (VU) | 51.0 | 50.8 |  | Jiménez et al., 2012 |
| Manx shearwater (LC) | 34.9 | 40.0 |  | Bull et al., 2005 |
| Cory’s shearwater (LC) | 52.8 | 53.1 | 14.8 | Navarro et al., 2009 |

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