

Summary Descriptions for Chewcard Interpretation

Selected diagnostic parameters

Findings from bite mark measurements and analysis conducted for the development of a range of chewcard interpretation tools by Manaaki Whenua - Landcare Research are summarised in Table 1. Ship rat measurements may include some Norway rats. Measurements were rounded to the nearest 0.5 mm before collating.

Table 1. Diagnostic parameters and supporting qualitative characteristics for chewcard bite mark identification.

Species	Sample size (animals/cards)	Quantitative parameters	Qualitative characteristics
Invertebrate	20 field cards	Circular impressions ≤ 0.3 mm diameter	Fine rough tears on margins and/or between card channels on one surface.
Mouse	45 field cards	Upper incisor pair width 0.5–1.2 mm	Small cuts on margins and/or material removed from between channels on one surface, with narrow (c. 1mm) heavily chewed band around smooth cut edges. Lower incisor pair strongly curved.
Kiore	11 skulls	Upper incisor pair width 1.6–1.8 mm	NA
Ship rat	91 field cards	Upper incisor pair width 1.8–2.5 mm	Small to large portion of (usually) both surfaces removed, leaving jagged edges, but usually without a chewed band. Lower incisor pair strongly curved.
Possum	161 field cards	Upper incisor pair width 3.5–6.6 mm.	Card surfaces \pm extensively crushed within about 5–20 mm of card edge, \pm including whole or partial incisor-pair impressions. Lower

			incisor pair more strongly curved than the upper pair.
Lagomorph	24 skulls	Upper incisor pair width 5.0–6.5 mm, comprising 4 humps (3 notches) in a straight line.	± large portions of card removed leaving cleanly cut edges buffered by a band of extensive incisor impressions. Lower incisor-pair impression c. 6 mm, straight with 1 medial notch.
Weasel	24 (3 field cards and 21 skulls)	Upper inter-canine distance 4.5–6.5 mm	Circular canines, puncture holes about 0.5–1.0 mm diameter.
Stoat	56 (7 field cards and 49 skulls)	Upper inter-canine distance 7.0–9.5 mm	Circular canines, puncture holes about 0.5–1.5 mm diameter.
Ferret	124 skulls	Upper inter-canine distance 10.0–14.0 mm	Circular canines, puncture holes about 1–2.5 mm diameter.
Cat	27 skulls	Upper inter-canine distance 14.5–22.0 mm	Circular canines, puncture holes about 1.5–3 mm diameter. Chewed card corners often missing.
Hedgehog	66 (33 field cards, 33 skulls)	Upper inter-canine distance 3.0–6.0 mm	Oval canines, puncture holes or depressions generally <1 mm (short) diameter. Blunt incisor impressions/crushing on lower card surface.
Ruminant (chamois and deer)	35 jaws	Single I1 tooth width 5.0–11.0 mm	Lower incisor arc about 20–60 mm wide and with no opposing incisor impressions.
Pig	6 skulls and two chewcards inspected	NA	Extensive biting and crushing by blunt peg-like teeth ± across the entire chewcard surface