

Accepted Manuscript

An analysis of visible patterns of horse bit wear

O. Doherty, V. Casey, P. McGreevy, A. McLean, P. Parker, S. Arkins

PII: S1558-7878(16)30244-1

DOI: [10.1016/j.jveb.2016.12.007](https://doi.org/10.1016/j.jveb.2016.12.007)

Reference: JVEB 1026

To appear in: *Journal of Veterinary Behavior*

Received Date: 8 February 2016

Revised Date: 28 November 2016

Accepted Date: 16 December 2016

Please cite this article as: Doherty, O., Casey, V., McGreevy, P., McLean, A., Parker, P., Arkins, S., An analysis of visible patterns of horse bit wear, *Journal of Veterinary Behavior* (2017), doi: 10.1016/j.jveb.2016.12.007.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



1 An analysis of visible patterns of horse bit wear

2

3 **Authors:** O. Doherty^{a*}, V. Casey^b, P. McGreevy^c, A. McLean^d, P. Parker^e, S. Arkins^a.

4 ^a **Faculty of Life Sciences, University of Limerick, Limerick, Ireland**

5 ^b**Physics Department, University of Limerick, Limerick, Ireland**

6 ^c**Faculty of Veterinary Sciences, University of Sydney, NSW, Australia.**

7 ^d**Australian Equine Behaviour Center, Clonbinane Road, Broadford, Vic 3658, Australia.**

8 ^e**Department of Applied Social Sciences, University College Dublin, Belfield, Dublin, Ireland.**

9

10 *** Corresponding Author.**

11 Email address: orladoherthy@live.ie

12

13 **Abstract**

14 Horse control is regularly achieved through the application of pressure by a bit against tissue
15 surfaces in the horse's mouth. The precise method of action of the bit in the mouth is still
16 poorly understood. In an assessment of damage and changes seen on the surfaces of bits
17 used in horse control, five independent assessors scored sixty photographic images of
18 fifteen bits on the most common signs of wear. Each photographic image of the bit was
19 divided into 4 -5 separate zones so that different areas on the bit surface could be
20 individually scored. The signs of wear scored for were changes in lustre (burnishing), bite
21 marks, food deposits and salivary staining. Using Cronbach's alpha values, inter-observer
22 reliability was found to be high (0.94). Kruskal-Wallis H and Mann-Whitney U tests
23 identified a higher frequency of bite marks on the central or medial areas of the bits
24 compared to the lateral areas ($p < 0.001$) whereas burnishing was distributed along the
25 whole length of the bits ($p > 0.5$). The least amounts of both food deposits and salivary
26 staining were found on the caudal aspect of the bits. The findings may reflect the type, level
27 and location of pressures exerted by oral surfaces against the bit. In addition, the location of
28 bite marks may help identify how the equine reacts orally to the presence of a bit within the

Download English Version:

<https://daneshyari.com/en/article/5535849>

Download Persian Version:

<https://daneshyari.com/article/5535849>

[Daneshyari.com](https://daneshyari.com)