Prevalence and distribution of the horse louse, *Werneckiella equi equi*, on hides collected at a horse abattoir in south-west England

**R. Gawler, G. C. Coles, K. A. Stafford**

TWO species of louse parasitise the horse: the sucking louse, *Haematopinus asini*, and the chewing louse, *Werneckiella equi equi*, formerly called *Damalinia equi*. *H asini* is most often found on the head, neck, back and inner thighs, and feeds on blood, while *W equi equi* is commonly found on the head, mane and base of the tail, and feeds on cells sloughed from the surface of the skin (Wright 1999). Allergens present in the saliva and faeces of the lice can give rise to severe irritation, leading to hyperkeratosis, pruritus (Perris 1995, Wright 1999) and, in heavy infestations, to weight loss and self-trauma (Gray 1995). Heavy infestations are more often associated with horses in poor condition, or as secondary conditions in horses with other diseases. Levels of infestation are usually higher in the winter months, when the horse’s thicker coat makes an ideal microclimate for the louse.

Reports from the USA (Jones and DiPietro 1996) and Canada (Wright 1999) state that infestations of domestic horses with lice are rare; this could be due to management practices, such as combing and clipping, or because of the use of broad-spectrum ectoparasiticides. However, lice are apparently a problem in the Falkland Islands (Pointing 2003). In the UK, 14 per cent of pony club members who responded to a postal questionnaire reported seeing lice on their ponies (Biggin and others 1999), and the prevalence was perceived to be highest in November and December.

In order to obtain up-to-date information on the prevalence of equine lice in the UK, the hides of 223 privately owned horses and ponies and of 35 semi-feral Dartmoor ponies were examined at a licensed horse abattoir from October 2002 to February 2003. The history of the privately owned horses and ponies was unknown, since most had been brought to the abattoir by horse dealers; however, all except young foals had been broken. The Dartmoor ponies had been rounded up off the moors at the end of September as part of management practices to control their numbers, and were not broken.

Hides, minus the head, were examined visually immediately following their removal, by making partings of the hair 10 cm in length all over the hide, and the presence or absence of lice was recorded. From these visual inspections of the hides, the number of lice at each of five predilection sites were recorded: the base of the mane, the shoulder, the underbelly, the tuber coxae, and the base of the tail.

The number of lice found on the hides is shown in FIG 3. The figures are the mean number at each site for the three privately owned horses and the six Dartmoor ponies.

FIG 1: Monthly percentages of the hides of privately owned horses and semi-feral Dartmoor ponies that were infested with lice

FIG 2: Mean monthly temperature and daily rainfall (sd) for the period of hide examinations for the south west of England. Data from the Meteorological Office

FIG 3 Numbers of lice present at the five predilection sites on (a) three privately owned horses and (b) six Dartmoor ponies

Veterinary Record (2005) 157, 419-420

R. Gawler, BSc,
Department of Anatomy,
University of Bristol,
Southwell Street,
Bristol BS2 8EJ

G. C. Coles, MA, PhD,
Chiol, FIBiol,
K. A. Stafford, BSc, MSc, LLB,
Department of Clinical Veterinary Science,
University of Bristol,
Langford House,
Bristol BS40 5DU
hides, five predilection sites were identified as being the areas where most lice were found. These were the base of the mane, the shoulder, the underbelly, the area surrounding the tuber coxae and the base of the tail. The numerical distribution of lice at the five predilection sites was determined in the same manner as was used in the initial examinations. When lice were found, combings were taken with a fine-toothed louse detector comb and returned to the laboratory for speciation. 

_W equi equi_ was the only species found. Lice were not found on privately owned horses during October. From the first inspection of Dartmoor pony hides, in November, lice were present. The prevalence of lice on the Dartmoor ponies increased during the winter months, with over 60 per cent of hides being infested in February (Fig 1). In privately owned horses, the highest prevalences of infestation were recorded in December and January (Fig 1). The mean monthly temperatures and rainfall for the study period are shown in Fig 2. The numbers of lice counted at each predilection site on the hides of three privately owned horses and six Dartmoor ponies are shown in Fig 3.

Since the horses’ heads were removed before hide removal, it was not possible to exclude infestations with _H asini_ on either the Dartmoor ponies or the privately owned horses. The percentage of hides infested with lice appeared to peak earlier in the study period in the privately owned horses than in the semi-feral Dartmoor ponies, but this could have been due to the numbers of hides available for inspection. The higher infestation rates in the Dartmoor ponies probably resulted from their longer, thicker hair, coupled with the lack of grooming and absence of any ectoparasite treatment.

The prevalence of _W equi equi_ in the privately owned horses in this study is consistent with the figures quoted from a questionnaire survey by Biggin and others (1999), and suggests that lice are uncommon on horses in south-west England. When attempts were made to collect lice for insecticide susceptibility studies in the winter of 2003/04, no infested hides were found (K. Stafford, unpublished observations), possibly as a result of the long, hot summer of 2003. A comparison of lice infestation rates in horses in Scotland with those from south-west England should indicate the importance of climate in determining the prevalence of _W equi equi_ in horses in the UK.

**ACKNOWLEDGEMENTS**

This honours project in equine science (R. G.) was supported by a gift from Intervet.

**References**


Prevalence and distribution of the horse louse, *Werneckiella equi equi*, on hides collected at a horse abattoir in south-west England

R. Gawler, G. C. Coles and K. A. Stafford

*Veterinary Record* 2005 157: 419-420
doi: 10.1136/vr.157.14.419

Updated information and services can be found at:
http://veterinaryrecord.bmj.com/content/157/14/419.citation

**Email alerting service**

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

**Notes**

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/