HOST RESPONSES TO SHEEP BITING LICE, *BOVICOLA OVIS* (SCHRANK).

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Most studies of host responses to ectoparasites have been with hematophagus or invasive parasites which directly contact elements of the host immune system. Sheep biting lice (*Bovicola ovis*) feed superficially on the skin surface of sheep ingesting lipid, desquamated skin cells, bacteria and surface squames of the outer stratum corneum. The presence of lice stimulates behavioural responses which cause fleece damage and which are often used by wool growers as an indicator of infestation. However, the relationship between pruritic behaviour and lice has not been well characterised and the mechanism by which this response is stimulated is uncertain.

Despite their superficial habit, sheep biting lice stimulate a range of immune responses in sheep. Immune responses to the presence of lice are probably the cause of pruritic behaviour, are likely to underlie differences amongst sheep in susceptibility to lice and may have a regulatory role. Better knowledge of the nature of immune responses to biting lice may provide improved methods of control. This paper will review recent work on behavioural and immune responses to sheep biting lice with a view to understanding the mechanisms which underlie pruritic response and regulation of louse populations.