

## **BACTERIA ASSOCIATED WITH CHEWING LICE: ENDOSYMBIONTS AND STUDIES OF COEVOLUTION.**

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According to some estimates over 70% of arthropods have endosymbiotic bacteria. These symbionts produce essential amino acids necessary for host survival, aid in the digestion of complex foods, manipulate host reproduction, and perform numerous other functions for their host. It appears from preliminary evidence that some lice contain a well-known endosymbiont in the genus *Wigglesworthia*. Interestingly, it seems that *Wigglesworthia* may have been lost in several lineages of chewing lice. We have recreated the evolutionary history of both host and symbiont (including the absence of symbionts in certain lineages) to better understand the evolutionary history of this assemblage and to better understand the role that *Wigglesworthia* plays in lice.