PHLOEM OR XYLEM FEEDING? USE OF VEGETATIVE AND REPRODUCTIVE PLANT PARTS AND TISSUES BY TWO LARGE NEOTROPICAL COREIDS

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Due to physiological and morphological constraints, large-sized hemipterans are predicted to more frequently use xylem than small ones. In addition, hemipterans with high mobility (e.g., true bugs) are able to use a wide range of plant parts, leading to an increase in diet range. The large neotropical coreids *Holymenia clavigera* Herbst and *Anisoscelis foliacea marginella* Dallas (Anisoscelini) were observed foraging on several plant parts of their hosts – Passifloraceae – and were thus examined with respect to feeding preferences and host use under laboratory and field conditions, as just a few studies have been devoted to this topic in tropical heteropterans. Histological sections of *Passiflora suberosa* L. were performed on feeding sites, on plant pieces having the penetrated stylet in situ. Both nymphs and adults of *H. clavigera* and *A. foliacea marginella* fed on all *P. suberosa* parts. First instar nymphs preferred the terminal buds, shifting to immature fruits after molting. When using leaves, the stylets reached the xylem, in almost all situations, followed by a low use of phloem. Nymphs and adults of both species consumed several fruit parts, including the seeds. When feeding upon the latter, endosperm and embryo were used for feeding. These findings agree with the general statement that large-sized hemipterans tend to use xylem. As seeds are the main resource used by these coreids, xylem feeding is probably related to water acquisition. Overall, this study highlights the food mixing condition of *H. clavigera* and *A. foliacea marginella*, as well as the importance of fruits for their nutrition.