



insects



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Plant Manipulation by Insects: Galls, Green Islands, and More

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Message from the Guest Editors

The induction of plant galls and green islands may be the most spectacular examples of how insects manipulate plants. Even processes as simple as insect feeding behaviors have also been shown to alter plants in ways that benefit insects. However, recent evidence suggests that broad-scale manipulation of plants by insects occurs in more subtle ways that can lead to modulation of plant defenses, manipulation of stomata leading to increased moisture content, higher leaf temperatures, and reduced emission of volatile organic compounds, and the alteration of nutrient partitioning within plants via the formation of mobilizing sinks. Research to understand more comprehensively how insects and their secretions impact the physiology, biochemistry, and gene expression of plants is in its infancy but will require an expanded toolbox of biochemical, immunohistochemical, and molecular approaches along with increased genetic resources for non-model organisms to expand our understanding.



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