

1933

## Additions to the Flora of Linn County

E. J. Petry

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### Recommended Citation

Petry, E. J. (1933) "Additions to the Flora of Linn County," *Proceedings of the Iowa Academy of Science*, 40(1), 79-79.

Available at: <https://scholarworks.uni.edu/pias/vol40/iss1/20>

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THE DEVELOPMENT OF NEW LATERAL ROOTS IN  
RELATION TO THE CROWN BUDS IN  
MELILOTUS ALBA

J. N. MARTIN

In transplanting the biennial sweet clovers from the field to the greenhouse during the dormant period it was observed that the removal of the crown buds interfered with the development of new secondary roots. In the absence of the crown buds fewer new secondary roots were formed and those formed were especially characterized by the absence of branching. The same results were obtained when light was excluded from the crown buds. This fact indicates a relationship between the formation of new secondary roots and the chlorophyll activity in the crown buds. By grafting crown buds on decrowned roots which were no longer capable of developing new secondary roots the ability to develop secondary roots was restored, provided the tissues of the root and crown bud united. Otherwise the grafted crown buds developed without imparting to the root the ability to form secondary roots. When the crown buds were removed or light excluded there was much less transformation of the reserve starch in the root.

DEPARTMENT OF BOTANY,  
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ADDITIONS TO THE FLORA OF LINN COUNTY

E. J. PETRY

A list of unreported species for Linn County, Iowa, together with remarks upon emendations.

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OBSERVATIONS ON THE STAINING OF  
BACTERIAL FLAGELLA

E. J. PETRY

Influence of the pH of the medium, on the staining of flagella, as shown by several of the more highly recommended methods.