On the Morphology and Anatomy of Aerial and Terrestrial Roots in some Bignoniaceous Genera

Lal Ji Singh[1,*] and Dharm Raj Misra[2]

[1,] Botanical Survey of India, ANRC, Port Blair 744 102, Andaman and Nicobar Islands, India.*
[2]Department of Botany, University of Allahabad, Allahabad- 211 002, India

ABSTRACT

Morphology and anatomy of roots of *Bignonia alliaceum* Lam., *Doxantha unguis-cati* Rehd. and *Pyrostegia venusta* Baill. (Bignoniaceae) have been studied. The roots are dimorphic in nature showing aerial as well as terrestrial roots. Presence of aerial roots in these genera has been reported for the first time. The aerial roots show a distinct polyarch condition. The terrestrial roots show great variations from diarch to tetrarch in *B. alliaceum* and tetra to hexarch in *Doxantha unguis-cati* and *P. venusta*. The secondary growth of terrestrial roots show abnormal activity of the cambium. The typical phloem wedges like that of stems are present in the roots. Presence of such phloem wedges in roots is being reported for the first time in terrestrial roots of *B. alliaceum*. Thus occurrence of phloem wedges is the characteristic feature of both terrestrial roots as well as their stems. However, Phloem wedges are completely absent in their aerial roots.

Key words: Aerial, *Bignonia alliaceum*, *Doxantha unguis-cati*, phloem wedge, polyarch, *Pyrostegia venusta*, terrestrial

Author for correspondence: Lal Ji Singh, e-mail: laljisingh1970@yahoo.com