OCCURRENCE OF ROOT NODULES IN ACACIA LEUCOPHLOEA (ROXB.) WILDL

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ABSTRACT

In the present study nodules have been reported on the roots of Acacia leucophloea from Karachi, Pakistan.

Key words: Acacia leucophloea, nodule morphology, legumes tree, Karachi

Legumes are widely distributed in Pakistani soils and Leguminoseae ranks as the third largest family in Pakistan in the order of abundance (Ali and Qaiser, 1986). Data compiled on nodulating ability of Pakistani legumes by Athar and Mahmood (1978, 1980, 1985, 1990), Mahmood and Athar (1985), Mahmood and Iqbal (1994), Athar (1996, 1997), Mahmood (1999) and Mahmood and Qadri (2004) showed that majority of them were nodulated in their natural ecosystems. In the present study nodules have been reported on the roots of Acacia leucophloea, a moderate size wild tree growing around Safari Park (Gulshan-e-Iqbal) and Karachi University Campus. Herbarium specimen was prepared. The size of the nodules varied between 1-2 mm and mainly distributed on secondary roots (Fig. 1). Nodules were elongated in shape and brown in colour. Nodules were distinguished from other kinds of pathogenic root malformations and stubby out growths (Truchet et al., 1989). The isolates were fast-growing, acid producing, gram negative bacilli. The bacterial colonies grown on yeast extract mannitol agar (YMA) medium were rounded, translucent and gummy and did not take the congo red stain.

Fig.1. Roots of Acacia leucophloea with nodules.
Nodules on the roots of *A. leucophloea* are being reported for the first time from Pakistan although nodules on the roots of this species have been reported from other countries (Allen and Allen, 1981; Halliday and Nakao, 1982; Mahmood, 1999; Mahmood and Qadri, 2000).

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