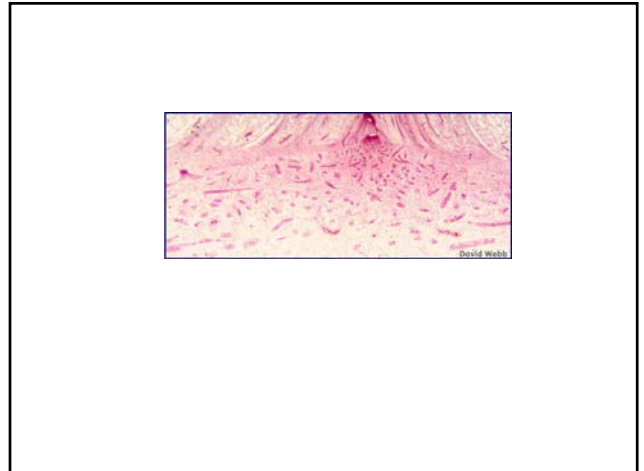
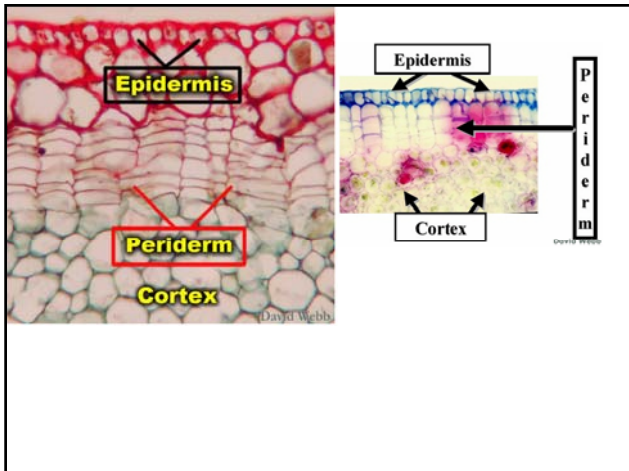
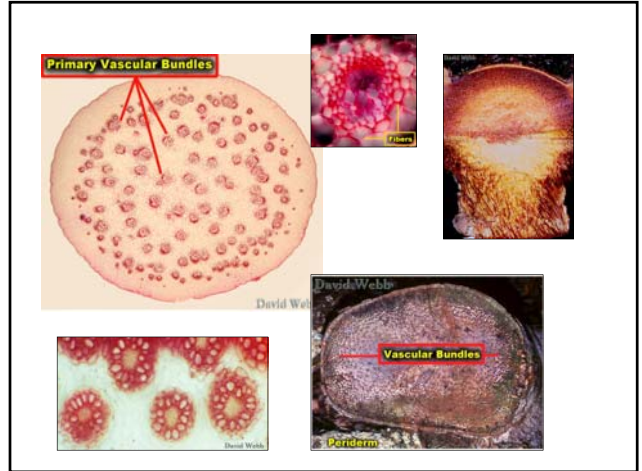
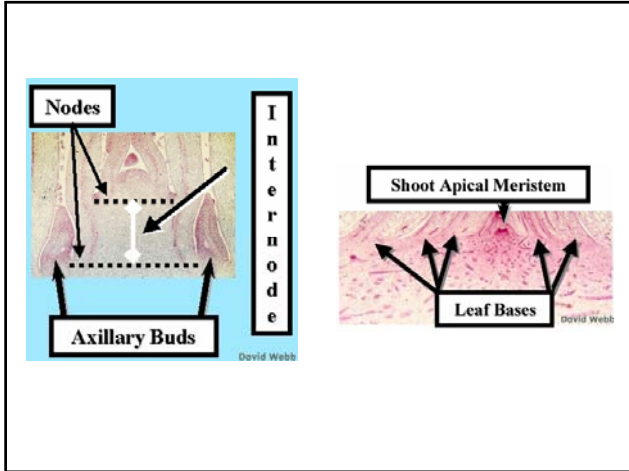
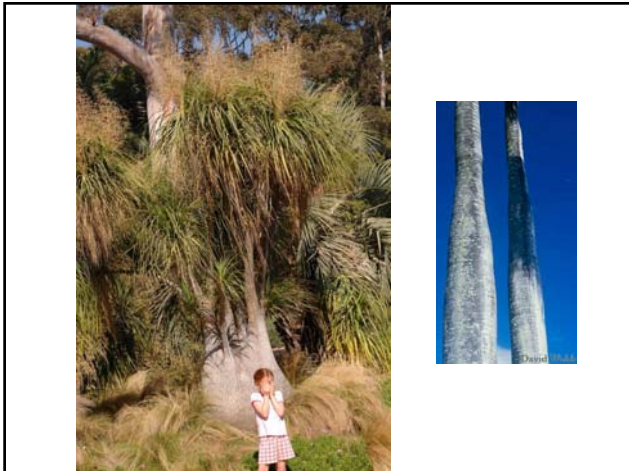


*Alloschmidia_glabrata*_NewCaledonia







Amer. J. Bot. 67(4): 476-489, 1980.

RADIAL GROWTH IN BEAUCARNEA RECURVATA¹

DENNIS WM. STEVENSON
Fairchild Tropical Garden, Miami, Florida 33156, and Cabot Foundation,
Harvard Forest, Petersham, Massachusetts 01366

ABSTRACT

An essentially unidirectional lateral meristem differentiates in the outer cortex at the hypocotyl-primary root juncture. This meristem, termed the secondary thickening meristem (STM), then differentiates acropetally towards the shoot apex. It produces secondary tissue (conspicuous tissue) centripetally. Dermal strands (secondary amphivasal vascular bundles) differentiate from proto-xylem strands in the conspicuous tissue. Root primordia also differentiate from derivatives of this meristem. A primary thickening meristem (PTM) which appears to be continuous with the shoot apex differentiates basipetally. The PTM gives rise to the large primary body of the cortical region of the shoot, and its activity results in the elevation of the leaf bases. In the seedling stages (i.e., for about 2 years) the PTM and STM are longitudinally continuous as a result of the basipetal differentiation of the former and acropetal differentiation of the latter. In adult shoots, however, the two are discontinuous.

RADIAL GROWTH in shoot systems of both arborescent and herbaceous monocotyledonous plants has received the attention of plant anatomists for over a century. As a result of these Eckardt (1941), and Krauss (1948) have described the PTM as being continuous with the shoot apex (Fig. 1), whereas Ball (1941), Lu and Chiang (1976), and DeMasson (1979) have

PTM
+
STM

