

clay, marl, sand, and sandstone, with hard and soft bands of limestone, containing alternations of marine, brackish, and fresh-water strata. This type of sedimentation evidently indicates more local and shallower basins of deposit than the wide Mediterranean sea, which stretched across the heart of the Old World in early Tertiary time.

LIFE.—The flora of Eocene time has been abundantly preserved on certain horizons. In the English Eocene groups, a succession of several distinct floras has been ob-

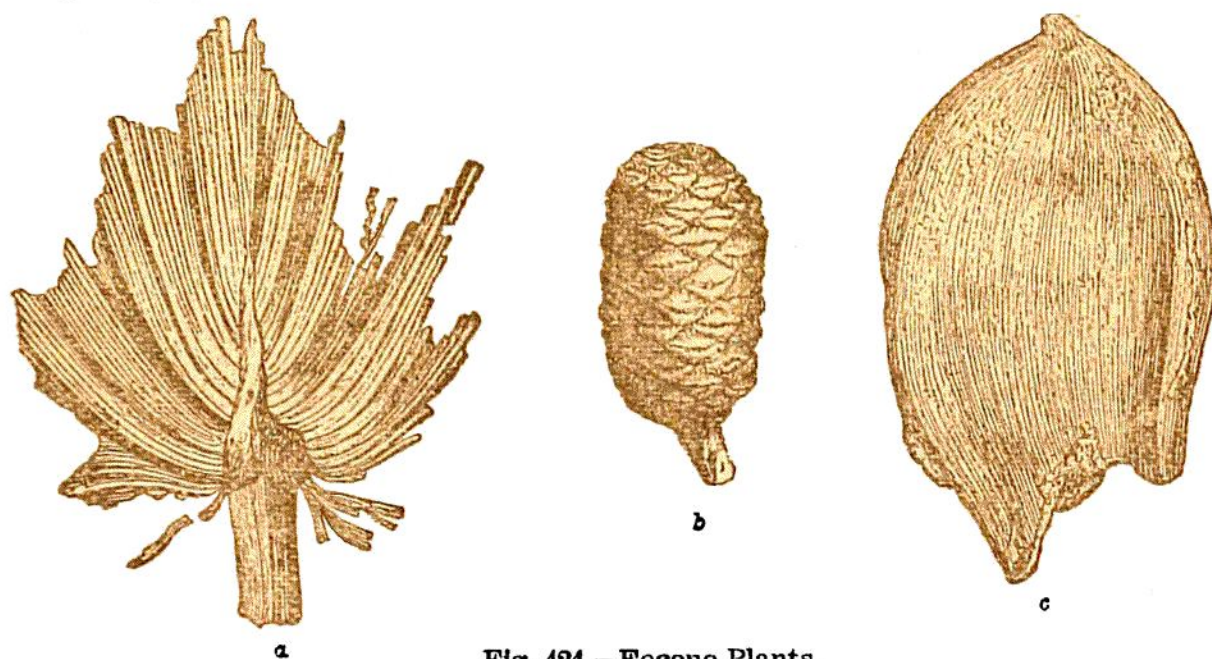


Fig. 424.—Eocene Plants.
a, *Sabal oxyrhachis*, Heer (reduced); b, *Petrophiloides Richardsoni*;
c, *Nipa Burtini*, Brongn. sp. ($\frac{1}{2}$).

served, those of the London Clay and Bagshot beds being particularly rich. The plants from the London Clay indicate a warm climate.⁶ They include species of *Callitris*, *Solenostrobus*, *Cupressinites*, *Sequoia*, *Salisburia*, *Agave*, *Smilax*, *Amomum*, *Nipa* (Fig. 424), *Magnolia*, *Nelumbium*, *Victoria*, *Hightea*, *Sapindus*, *Eucalyptus*, *Cotoneaster*, *Prunus*, *Amygdalus*, *Faboidea*, etc. Proteaceous plants like the living Australian *Petrophila* and *Isopogon* have been asserted to occur in the Lower Eocene vegetation, but their

⁶ Ettingshausen, Proc. Roy. Soc. xxix. 1879, p. 388.