

short, detoid and flattened, each with two or three flowers. Calyx-tube much less rounded and more angular than fruit, about three lines long, with a similar diameter at its dilated orifice; operculum short, verrucous, with orbicular point. Fruit hard, generally winged or angled twice, globose or ovoid, from three to four lines in diameter, much dilated at orifice, the rim rounded and slightly prominent, capsule sunk, but valves protruding when open.

INTRODUCTORY REMARKS BY BARON VON MUELLER, K.C.M.G.,
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“Of the genus *Eucalyptus* twelve species have hitherto been recorded from Tasmania, and as fairly well marked, three of these being endemic, the others occurring also on the mainland of Australia. The species peculiar to the island are *Eucalyptus cordata*, *E. urnigera*, and *E. vernicosa*—all three linked together by several characteristics, so that it is not always easy to refer occasional aberrant or transitory forms to the species from which they originated. In my *Eucalyptography*, the *E. cordata* became rather extensively elucidated, through the kind aid of Mr. T. Stephens and Mr. F. Abbott, its close relation to *E. urnigera* being then brought under particular notice; but *E. vernicosa* remained hitherto, in the above-mentioned work, unattended to for want of sufficient material—though already, some years ago, a lithographic drawing of its typical state became prepared and printed. This was withheld from publication, as it seemed likely that the plant, in its very dwarf state, represented the highland form of a taller plant of sub-alpine regions, analogies offered by some other plants also in Tasmania pointing in that direction. Indeed, when ascending Mount Field East in 1869, I came across an *Eucalypt*, at elevations between 3,000 and 4,000 feet, which rose in that frigid region to fully 30 feet, and which seemed to me rather a tall state of *E. vernicosa* than a variety of *E. Gunnii*. Very far away from any settlement, and in so inclement a tract of country, my stay could only be brief—protective cover and provender having to be carried by pedestrians, and a track for some distance to be cut through the dense sub-alpine scrubs. This particular tree differed from the well-known “*Cider-tree*” of Tasmania in its very rigid, dark-green leaves, with a tendency to marginal crenulation, and with a somewhat oily lustre on both parts; moreover the calyces being somewhat verrucular, rough and their orbicular portion not prominently pointed, as in the normal state of *E. Gunnii*, defined by Sir Joseph Hooker’s original diagnosis (London “*Journal of Botany*,” III, 499); the fruits being also more abbreviated than those described in 1844, and as delineated by Fitch in 1860 (“*Flor. Tasm.*,” I, Plate xxvii).

From the above remarks it will be perceived that the plant from near the Lakes of Mount Field offers some approach to *E. urnigera*; and this is borne out by specimens of evidently the same tree just submitted to me by Mr. T. B. Moore, as obtained by him during recent surveys across the Mount Wellington ranges. It rises there even to the stupendous height of 200 feet, half that size being still reached in the cool elevations of 2,000 feet. Mr. Moore observed the bark to be smooth, of a reddish or chocolate colour, but where fresh shed it being mottled with yellowish streaks or blotches. The leaves are ovate-lanceolar, and attain a length of four inches.

It remains now to be shown, in what precise position systematically *E. vernicosa* is standing to *E. urnigera* and to *E. Gunnii*, after this most highly developed state of the former became discovered; but these comparisons can be carried on much better by local observers in the forests themselves, than by observations on necessarily limited and fragmentary material in a remote study-room. But whatever exact place this tree found by Mr. Moore may phytographically occupy, it will add a most important one to the very few of the genus which bear considerable frost; and as the timber is pronounced by that gentleman as extremely hard, close-grained, tough and heavy, this hardy Eucalypt should be brought speedily and extensively under trial culture in cool climates—when also the characteristics of the seedlings would, for diagnostic purposes, come under observation. In conclusion I may add, that the small-leaved dwarf alpine state of *E. vernicosa* is now known also from Mount Arrowsmith (Gulliver), Mount Norfolk (Emmett), and Mount Sorell (Milligan).”

NOTES ON THE GEOLOGY OF THE KING RIVER,
TOGETHER WITH A BRIEF ACCOUNT OF THE
HISTORY OF GOLD-MINING IN AUSTRALASIA.

BY ROBERT M. JOHNSTON. F.L.S.

The Archæan and Silurian rocks of Western Tasmania form a series of folds whose axes traverse the country north and south. The great folds generally are anticlines, and are composed principally of quartzite, metamorphic schists, conglomerates, etc.

QUEEN RIVER GROUP.

The axis of one of the great north and south anticlines running northward from the Gordon and immediately west