

- Samolus repens Pers. [Brown's ms. descr. under "*S. littoralis*"]
 Scævola calendulacea (Andr.) Druce (TYPE in part *S. suaveolens* R. Br. also N.S.W., Q.)
S. microcarpa Cav., var. *pallida* (R. Br.) Benth. (MEL)
 (TYPE wholly *S. pallida* R. Br.)
 Selaginella uliginosa (Labill.) Spring.
Senecio lautus Forst. f. ex Willd.
 [Brown's ms. descr. under "*S. polymorphus*"]
Sporobolus virginicus (L.) Kunth
Tetragonia expansa Murr.
Tetrarrhena juncea R. Br. (TYPE wholly)
Tetratheca ciliata Lindl. (MEL)
Thesium australe R. Br. (TYPE in part; also N.S.W., Tas.)
Velleia paradoxa R. Br. (TYPE in part; also Tas.)
Veronica calycina R. Br. (TYPE in part; also Tas.)
V. derwentia Littlej. in Andr.
Viminaria juncea (Schrad.) Hoffm. [syn. *V. denudata* Sm.]
Viola betonicifolia Sm. (MEL)
Wahlenbergia bicolor N. Lothian (TYPE in part; also N.S.W.) [syn. *Campanula gracilis* Forst., var. *stricta* R. Br., No. 2617]
W. billardieri N. Lothian
Wilsonia humilis R. Br. (MEL) (TYPE in part; also W.A.)
Xyris gracilis R. Br. (TYPE in part; also Tas.)

[In the preceding paper, a complete transcript of Brown's journal account of his experiences on King Island and in Port Phillip Bay, April-May 1802, was given. Grateful appreciation is extended to the Photographic Section at Australia House, London, which undertook the immense task of filming Brown's ms. journal and some 50,000 sheets of botanical descriptions.]

NOTES ON THE GROWTH OF AN ENGLISH ELM

In the *Proceedings of the Royal Society of Victoria* 31: 377 (1918), the late Professor A. J. Ewart recorded the growth in circumference of an English Elm, *Ulmus procera*, situated in the King's Domain near the present Shrine of Remembrance, Melbourne.

A smooth surface, which is still apparent, was prepared on a horizontal line, 5 ft. 6 ins. from the ground. The circumference in 1918 was 6 ft. 10 ins., and no growth was shown from July until the end of October. Growth began in November, but even at the middle of December the increase barely exceeded a quarter of an inch. The main growth took place from the 15th of December to the end of February, and amounted to one inch. It remained stationary until March, but at the beginning of April had decreased by 0.2 of an inch, and at the end of April by 0.3 in. Ewart stated: "Probably this contraction is due to the cambium layers being no longer so highly distended as when actually growing".

Reporting on similar experiments, D. T. MacDougal in "Growth in Trees", Carnegie Institute of Washington *Publication* No. 307 (1921), states: "The greatest amount of increase or change in volume is that which results from the multiplication by fission of the cambium cells, and their enlargement accompanied by the differentiations mentioned, all based upon hydration of cell-colloids".

In a similar experiment on the growth of a cultivated deciduous Velvet Ash (*Fraxinus velutina*), he records that trunk enlargements began on March 10th and continued until August 25th. The total increase in diameter of the tree amounted to 26 mm. or an inch per year.

The English Elm tree in the Domain, Melbourne, was again measured along the prepared line on August 15th, 1951, the circumference being then 9 ft. 11.5 ins.—an increase of exactly three feet (36 ins.) in thirty-three years. This corresponds closely to the rate of growth recorded of other similarly cultivated deciduous trees growing north of the Equator, each tree having a five months' growth range.

—P. F. Morris.