Banks, an act of generosity on which particular stress was laid in the necrology of Banks in the French Academy. The results of LaBillardiere's researches during D' Entrecasteaux's expedition are largely contained in the two folio volumes, "Novae Hollandiæ plantarum specimen," 1804-6; in the "Relation du voyage a la recherche de La Perouse," 1799, of which soon subsequently an English translation appeared. Further, in the illustrated quarto publication, "Sextum Austro-Caledonium" (1824-5), his three weeks' stay in New Caledonia during D'Entrecasteaux's voyage affording La Billardiere the opportunity to shed almost the first scientific light on the largely endemic vegetation of that island, but very little having been elucidated of that flora by the two Forsters previously.

Sir James Smith having already, in 1793, dedicated the genus Billardiere to the botanical companion of D'Entrecasteaux, it being founded on the widely distributed south-east Australian Billardiere scandens, to which, curiously enough, LaBillardiere was able to add in Tasmania the graceful and elegant B. longi flora De Candolle, described a third in 1824, Bentham a fourth in 1863, while in late years four species more were added to the genus by myself. (See Census of Australian plants, p. 7.) It seems, however, not likely that the genus will receive further additions to its eight now known species.

DESCRIPTION OF TWO NEW SPECIES OF TERTIARY FOSSIL PLANTS BELONGING TO THE GENERA *EUCALYPTUS* and *TAXITES*.

By Robert M. Johnston, F.L.S.

[*Read August* 10, 1885.]

Among a very interesting collection of Fossil Plants, now in the Royal Society's Museum, I have discovered a new species of Eucalyptus. This collection contains numerous impressions of leaves belonging to the genera Laurus, Cinnamomum, Fagus, Magnolia, and others more difficult to determine. The general character of these remains (at one time carefully numbered) as well as the species *Cinnamomum polymorphoides*, McCoy indicate that they probably belong to the same horizon as the lower zone of the Launceston Tertiary Basin.

The locality whence they were obtained, however, is not known to me, although I had made enquiries of the late Messrs. R. Gunn, and Roblin, and also of Mr. T. Stephens, and others who might be expected to throw light upon the matter. I am inclined to the opinion that they were collected by the late Dr. Milligan from the Tertiary Leaf Beds at Macquarie Harbour. A fresh collection from this place might satisfactorily set this doubt at rest.

The species of *Taxites* with fragmentary coniferous and other plant impressions, too imperfect for determination, was kindly forwarded to me by G. Thureau, F.G.S., Inspector of Mines, who collected them in clayey beds underlying and intercalated between the basalt sheets at Mount Bischoff. Mr. Thureau states that these clays overlie and are intimately associated with the tin drift deposits at this place, and he thinks that the clay sediments were derived from the volcanic tuffs and other ejecta.

The species of Eucalyptus I have named in honour of Dr. Milligan, who was the first local worker in Tasmania who contributed largely to our knowledge of Tasmanian geology. The species of Taxites I have named in honour of Mr. Thureau, who has afforded us, in his many official reports, much valuable information regarding the mineralogy and stratigraphy of the important mining localities.

The following is a description of the species referred to :—

Taxites. *Brogniart.*

Leaves linear, narrow, or sub-falcate, obtuse, coriaceous, fleshy, with a median rib ending in a minute mucrone, flat, furnished with a half twisted pedicel which is briefly decurrent.

Taxites Thureaui, nov. sp.

Branchlets narrow, leaflets numerous, linear, somewhat falcate, alternate, bilaterally and closely disposed, emerging from the axis of branchlet at an acute angle; extremites pointed and slightly incurved; decurrent pedicels nearly as broad as leaves, and forming an imbricated appearance along the axis of branchlets which is very fine; branchlets terminating in imbricated broad scaly heads, probably containing the fruit. Leaflet 2 millimetres long. Breadth across branchlet measuring from tip to tip of bilateral leaflets 10 millimetres.

Locality—Tertiary leaf Beds, Mount Bischoff.

Eucalyptus Milligani, nov. sp.

Leaves ovate-lanceolate or lanceolate, mucronate acute, with very numerous fine transverse parallel veins, the intramarginal one scarcely distant from the edge. The lateral parallel veins emerge and radiate gently outwards and upwards. This

species more closely approaches the existing *Eucalyptus ficifolia* of Western Australia than to existing species in Tasmania, or to the described fossil species *E. Kayseri*, mihi, and *E. Pluti* M'Coy. Large specimens 9 inches long when perfect, and $2\frac{5}{8}$ inches broad at greatest diameter.

Supposed locality—Tertiary Leaf Beds, Macquarie Harbour.

MOSS FLOWERS, SPLIT-MOSS, BOG-MOSS, AND EARTH-MOSS.

By R. A. Bastow,

[*Read August* 10, 1885.]

Moss Flowers.

In a paper on Mosses, read before this Society on the 12th of last May, the more easily distinguished generic characters of that natural order were described, and amongst them the peristomes or fringes of teeth surrounding the mouths of the fruit capsules, which deck their summits as with jewelled crowns. The inflorescence of these tiny plants was not referred to at that time; nevertheless, a brief description thereof is essential to the study of bryology, and it may interest the Fellows of the Royal Society.

The male inflorescence consists of *antheridia*, minute oblong bodies intermixed with a number of jointed filaments, or *paraphyses*. These are enclosed by leaves, and altogether form a small bud-like flower (*flos gemmaceus, Mitt.*), or they are sometimes surrounded by short spreading leaves, and, consequently, with the antheridia visible from above (*flos discoideus, Mitt.*). Some species of these latter flowers cannot fail to attract the attention of the most casual observer, appearing, as they do, to the unassisted vision, even at the distance of two or three yards, as glittering green or reddish stars dotted about on the darker green velvety masses of moss that cushion the moist and clayey bank.

The female inflorescence consists of *archegonia*, small bodies of an oblong form and swollen at the base. Individually, they are not unlike a flask in appearance, the upper portion or neck being in some respects analogous to the style and stigma in a phanerogamous plant. These are also mixed with jointed filaments or paraphyses, and in some species they may be found with antheridia in the same flower, they are then *synoicous*.