

## Supplementary Material

### **F. Mueller, ‘The Murray-scrub, Sketched Botanically’, 1850: A Humboldtian Description of Mallee Vegetation**

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### **Der Murrayscrub, botanisch skizzirt von Ferdinand Müller, *Das Ausland*, 23(2), no. 276, 18 November 1850, pp. 1101-2**

Translated by Thomas A. Darragh

### **The Murray Scrub, botanically sketched**

**By Dr Ferdinand Mueller\***

Of all the regions of South Australia the stretch of country extending between the mountains<sup>1</sup> and the Murray<sup>2</sup> is certainly the most peculiar with respect to its vegetation, and perhaps over no other part of New Holland<sup>3</sup> with the dry sand of a desert are the plants scattered in such rich profusion, as the Murray Scrub presents to us. The powerful impression that this landscape will leave in every traveller, who wanders through the river basin with a mind that is susceptible to natural scenery, is evoked not only by the strange type of plants, nor merely by the elegance of the blooms and the stiff often wonderful forms of the leaves and foliage, but rather by the general inhospitable expression of the region, by the low and dismal masses of trees that extend before the one who penetrates it like an endless labyrinth. Not without slight dread does this thought intrude upon us; — the vertical leaves just give no shadow, certainly no spring is to be found, no pool and rarely only a tiny fruit to refresh the one who is lost!<sup>4</sup>

If we examine the plants more closely, we are surprised just as much by the monotonous recurrence of the same small slender eucalypt<sup>5</sup> trees, as by the constant interchange of bushes and herbs. The former establish the character of the landscape of the scrub in their endless distribution, in their dense wooded grouping together and especially by their constant but low height. When we look down from an elevation on this extended dwarf forest, it is as if the slim branches move in the wind like huge waves of the sea. In external appearance I would not know anything else that I could compare them with other than dense willow plantations, although only growth and leaf form show similarity. When particularly on more open places, flowery acacias<sup>6</sup> interrupt the monotony of tree growth, their peculiar forms, in which they seem to mock all laws of nature, stand out all the more imposingly, here combined by compact growth and armed phyllodes into impenetrable hedges, there grouped together in beautiful boskets<sup>7</sup> or mixed among eucalypts beautifying the surroundings. Even if a sandal tree (native peach)<sup>8</sup> an isolated *Pittosporum*<sup>9</sup> or a *Myoporum*<sup>10</sup> with elegant pendulant branches appears instead of the eucalypts, and perhaps even the pyramidal sandarac-cypress intermingles numerous<sup>11</sup>, all these plants certainly do not enliven the dark picture of the landscape.

However, if we look at the more low-growing plants that seek protection in the dense undergrowth against the heat of the Australian Sirocco,<sup>12</sup> the most striking Diosmaceae attract us first: pink flowering boronias,<sup>13</sup> epacrid-leaved *Eriostemon*,<sup>14</sup> correas<sup>15</sup> with splendid bell-like flowers, the red colour of which blends smoothly into the yellow-green margin, alternate in the colourful mixture with the *Phebalium*<sup>16</sup> conspicuous above all else, which seems even more wonderful by the half silver shining leaves and the numerous inflated resin<sup>17</sup> granules, — all spreading the aromatic perfume pertaining to this group, to combine it agreeably with the fragrance of the acacias and the volatile oils of the eucalypts.

Soon leafless, stinging leptomarias with sour-ish stone fruits,<sup>18</sup> mourning *Exocarpus*<sup>19</sup> and other fruit bushes from the sandal wood family, small

casuarinas in outward appearance like the horse-tails,<sup>20</sup> grey strange *Hakea*<sup>21</sup> species and other unadorned plants of sturdy form follow; but constantly associating with them are Flora's more delightful children, who we laboriously take care of in our gardens: speckled-bloomed *Stenochilos*<sup>22</sup> form a pleasing contrast with aster-like eurybias<sup>23</sup> and pretty thomasias<sup>24</sup>, whilst damperias<sup>25</sup> with the leaves of the rosemary and alternating flower colours, loudonias<sup>26</sup> "of gleaming yellow", as their discoverer appropriately described them, cyan-blue halganias<sup>27</sup> and dillwynias with brick-red corolla compete to decorate the wilderness with dazzling colours. More rarely magnificent prostantheras, the related *Klanderia*<sup>28</sup> with delicate crimson corolla, thorny *Scaevola*,<sup>29</sup> the slender camphor myrtle<sup>30</sup> and pretty baekeas<sup>31</sup> are mixed in the colourful throng, while billardieras<sup>32</sup> and *Cassynia* species entwine the neighbouring plants. However, the numerous resplendent everlastings<sup>33</sup> certainly bestow the greatest attraction on the region, and by losing ourselves in their viewing we believe ourselves to be transported to the Cape Colony, and *Pimelea*<sup>34</sup> species, *Wahlenbergia*,<sup>35</sup> loganias<sup>36</sup> and *Erica*-like epacrids again facilitate us to draw the parallels, shaggy trichinias,<sup>37</sup> box-leaved *Alyxia*,<sup>38</sup> *Cassia*<sup>39</sup> and *Croton*<sup>40</sup> bushes, dodonaeas<sup>41</sup> with simple or pinnate leaves and purple winged capsules and mistletoes resplendent in red and yellow tufts of flowers transport us by induction or comparison to plants that only flourish in a tropical climate, in a more beautiful nature. — Others form points of contact with plant forms that belong predominantly to the steppes at the Swan River: grevilleas<sup>42</sup> distinguished by pale squarrose leaves and by beautifully red posies of flowers, low banksias,<sup>43</sup> the blossoms of which combined into almost copper-coloured cones.

However, amongst this crowd of strange forms, we also meet forms from home: here a groundsel,<sup>44</sup> a coloured eye-bright,<sup>45</sup> the Australian field poppy, there a nightshade,<sup>46</sup> speedwell,<sup>47</sup> gahlias or strange milk-worts;<sup>48</sup> but the delightful deception disappears on closer examination, and we remember that they are the antipodes of ours.<sup>49</sup> In vain do we look around us for grassy meadows, for the fresh beneficial green of the fields; no turf, no delicate blade clothes the dry soil and it puts forth grass sparingly, it is so hard and without nutrients. This region

will remain closed to cultivation forever!

Two remarkable phenomena characterise the vegetation of the Murray Scrub more particularly. We note that the stiff type, which is so unmistakably imprinted on the plants of New Holland anyway, maintains its sharpest expression here, and then it seems to us as if some plants here had stopped in their development; thus we find species of *Eurybia*, *Prostanthera*,<sup>50</sup> and *Chrysocephalum*<sup>51</sup> with small branches, that are alluded to just as innovations, without ever developing; furthermore we observed here more than elsewhere both in the organs of nourishment as well as particularly in the organs of reproduction, stunted growth or absence of whole parts.

I have tried to sketch here in short outlines the botanical portrayal of an interesting tract of country. Perhaps something that I indicated has only local value, perhaps many features have even escaped me. Precise descriptions of nature presuppose longer observations than mine, for which local obstacles there still stand in the way. However, may what I conclude here as sketches be transformed through the efforts of talented naturalists into a lively picture which resembles the wonderful region.

\* Taken from the *Südaustralische Zeitung* conducted by Mücke, Schomburgk and Dröge. This is already the second German newspaper that is published among the constantly increasing German colonists.

[The *Hamburger Garten- und Blumen Zeitung* stated in a footnote: Dr Müller is at present in Adelaide and has already shown his activity as a naturalist and botanist by rich collections of seeds and dried plants. The collections of the latter are mostly in the hands of Dr. Sonder here. The following paper on the Murray Scrub we take from the *Südaustralische Zeitung* edited by Messrs C. Mücke, Otto Schomburgk and C. Droege in Adelaide. The publisher.]

<sup>1</sup> Mt Lofty Ranges.

<sup>2</sup> Murray River.

<sup>3</sup> Australia.

<sup>4</sup> Possibly a reference to the explorer Ludwig Leichhardt, who was expected to reach the Swan River colony in 1850, but never arrived. Mueller raised the alarm about Leichhardt in a letter to the Editor of the *Deutsche Zeitung* (reproduced in the *South Australian*, 5 August 1851, p. 4).

<sup>5</sup> *Eucalyptus* L'Her. The names and authors of taxa in endnotes are as in: F. Mueller, 'Systematic Index of the Plants of Victoria', *First General Report of the Government Botanist on the Vegetation of the Colony*, (Melbourne, 1853). F. Mueller, 'Second Systematic Index of the Plants of Victoria', *Second General Report of the Government Botanist on the Vegetation of the Colony*, (Melbourne, 1854). F. Mueller, *A Systematic Census of Australian Plants*, (Melbourne, 1882). Current names are as in the Australian Plant Census (<http://www.chah.gov.au/apc/about-APC.html>).

<sup>6</sup> *Acacia* Willd. [now *Acacia* Mill.].

<sup>7</sup> A formal plantation of trees in a garden or a thicket.

<sup>8</sup> Mueller records *Santalum Preissianum* Miq. [now *S. acuminatum* (R.Br.) A.DC.] in Mueller, 1853, already cited (n. 5).

<sup>9</sup> *Pittosporum* Sol. [now *Pittosporum* Banks ex Gaert.].

<sup>10</sup> *Myoporum* Banks & Sol. [now *Myoporum* Banks & Sol. ex G.Forst.].

<sup>11</sup> Mueller records *Callitris pyramidalis* Sw. [now *C. pyramidalis* (Miq.) J.E.Piggin & J.J.Bruhl] in Mueller, 1853, already cited (n. 5). NB This species is currently regarded as endemic to southwestern Australia.

<sup>12</sup> The Sirocco, a hot wind, blows north across the Mediterranean Sea to Europe.

<sup>13</sup> *Boronia* Sm.

<sup>14</sup> Mueller records *Eriostemon pungens* Lindl. in Mueller, 1853, already cited (n. 5).

<sup>15</sup> *Correa* Sm. [now *Correa* Andrews].

<sup>16</sup> *Phebalium* Vent.

<sup>17</sup> The German text reads Hertzkörnchen literally heart granules, which makes no sense. This is probably a spelling error for Harzkörnchen or resin granules, which makes sense in this context.

<sup>18</sup> Mueller records *Leptomaria pungens* F.Muell. [now *L. aphylla* R.Br.] and *L. acerba* F.Muell. [now *Omphacomeria acerba* (R.Br.) A.DC.] in Mueller, 1853, already cited (n. 5).

<sup>19</sup> Mueller records *Exocarpus cupressiformis* Labill. [now *Exocarpos cupressiformis* Labill.] in Mueller, 1853, already cited (n. 5).

<sup>20</sup> *Casuarina* Rumph. [now *Allocasuarina* L.A.S.Johnson].

<sup>21</sup> *Hakea* Schrad. [now *Hakea* Schrad. & J.C.Wendl.].

<sup>22</sup> *Stenochilus* R.Br. [now *Eremophila* R.Br.].

<sup>23</sup> *Eurybia* (Cass.) Cass.

<sup>24</sup> *Thomasia* J.Gay.

<sup>25</sup> *Dampiera* R.Br.

<sup>26</sup> *Loudonia* Lindl. Mueller records *L. aurea* Lindl. and *L. behrii* Schldtl in SA in Mueller, 1882, already cited (n. 5). [This is now *Glischrocaryon* Endl.]

<sup>27</sup> *Halgania* Gaudich.

<sup>28</sup> *Klanderia* F.Muell. [now *Prostanthera* Labill.].

<sup>29</sup> *Scaevola* L.

<sup>30</sup> *Camphoromyrtus* Schauer. This is now *Triplarina* Raf. A NSW/Qld genus. Possibly *Babingtonia behrii* (Schldtl.) A.R. Bean (= *Camphomyrtus behrii* Schldtl.)

<sup>31</sup> *Baekkea* L.

<sup>32</sup> *Billardiera* Sm.

- <sup>33</sup> Probably *Helichrysum* Gaert. [now *Helichrysum* Mill.].
- <sup>34</sup> *Pimelea* Banks & Sol. [now *Pimelea* Banks & Sol. ex Gaertn.].
- <sup>35</sup> *Wahlenbergia* Schrad. [now *Wahlenbergia* Schrad. ex Roth.].
- <sup>36</sup> *Logania* R.Br.
- <sup>37</sup> *Trichinium* R.Br. [now *Ptilotus* R.Br.].
- <sup>38</sup> *Alyxia buxifolia* R.Br.
- <sup>39</sup> *Cassia* L. [now *Senna* Mill.]
- <sup>40</sup> *Croton* L. Mueller does not record any species in SA in Mueller, 1882, already cited (n. 5). Today *Croton* occurs only in NSW, Qld, WA & NT. According to the South Australian Plant Census, there are a few species that were called *Croton* in Mueller's time. This might be a species of *Adriana*. See eFloraSA web-site: [http://www.flora.sa.gov.au/cgi-bin/census\\_display.cgi?datasource=general-public&family=&genus=croton&species=&style=book&format=HTML&submit=Search&synonym=1](http://www.flora.sa.gov.au/cgi-bin/census_display.cgi?datasource=general-public&family=&genus=croton&species=&style=book&format=HTML&submit=Search&synonym=1)
- <sup>41</sup> *Dodonea* L. [now *Dodonea* Mill.].
- <sup>42</sup> *Grevillea* R.Br. [now *Grevillea* R.Br. ex Knight].
- <sup>43</sup> *Banksia* L.f.
- <sup>44</sup> *Senecio* L.
- <sup>45</sup> *Euphrasia* L.
- <sup>46</sup> *Solanum* L.
- <sup>47</sup> *Veronica* L.
- <sup>48</sup> *Polygala* L.
- <sup>49</sup> In *Hamburger Garten- und Blumen Zeitung* 'they are the antipodes of European plants.'
- <sup>50</sup> *Prostanthera* Labill.
- <sup>51</sup> *Chrysocephalum* Walp.