

as 1823 by Achille Richard ("Histoire des medicamens, des poisons et des alimens tirés du règne végétal," in two volumes). Otherwise that work follows Jussieu's system, only the portion comprising the Apetalæ rendering that natural system, as a whole imperfect. But what has been cursorily explained in these pages forms but few of the thousandfold proofs, how nature in its freedom sportively overleaps the boundaries, by which systematists vainly endeavour to narrow the endless and marvellous forms of its organisms for strict literary arrangement or demarcation.

INDIGENOUS AUSTRALIAN FORAGE PLANTS, (Non-GRASSES) INCLUDING PLANTS INJURIOUS TO STOCK.

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[Read before the Royal Society of N.S.W., June 6, 1888.]

OWING to the severity of the droughts, (and in some districts, the competition of rabbits and other vermin) cattle and sheep in Australia have at times to endeavour to preserve existence by devouring any vegetable matter whatsoever. The plants therefore eaten by stock embrace a very large number of species, but I have confined myself in the following pages to references to the plants usually eaten by them, either because they are abundant, or readily withstand the drought. or because stock are very partial to browsing upon them. The poisonous plants of course come under different category. If I were to record the names of all *suspected* poisonous plants, the list would be a very large one. The observations of bushmen as to the poisonous nature of certain plants, are not always to be relied on,* and the enquiry even to a scientific man, is attended with much difficulty. In "Plants injurious to Stock," (Bailey and Gordon), Govt. Printer, Brisbane, will be found references to a number of suspected plants, but in regard to many, the verdict of "not proven" must be entered.

* The allegation is from time to time made in the newspapers, that sometimes through ignorance, and sometimes as a matter of expediency, squatters report that their sheep or cattle have fallen victims to poison-weeds, when in reality they have perished from disease. Whatever the extent of this misrepresentation may be, it is an undoubted fact that during the last few years, many instances of alleged poisoning by weeds having been enquired into on the spot by a competent veterinarian, have been proved to have been caused by disease.

See also "Remarks on some indigenous shrubs of South Australia suitable for culture as fodder." (S. Dixon). *Proc. R. S. of S.A.*, Vol. viii. See also a paper by the Rev. Dr. Woolls, "On the Forage Plants indigenous in New South Wales." (*Proc. Linn. Soc., N.S.W.*, vii., 310.)

Notes on the plants eaten (whether from inclination or necessity) by stock, with good or bad results, the distribution of them, together with any other particulars bearing upon their use as fodder-plants, are much required, as the systematic recording of such information is even yet (at least as far as Australia is concerned) in its infancy. It is highly desirable to collect seeds of each useful (or likely to be useful) fodder-plant, for experimental cultivation, either with the view to its improvement under such treatment, or with the view to acclimatise it in some other country in which it is not indigenous or already introduced. A careful system of exchange of this kind cannot but result in benefit to the countries concerned.

1. *ABRUS PRECATORIUS*, *Linn.*, B. Fl., ii., 270. Syn.: *A. pauciflorus*, Desv.; *A. squamulosus*, E. Mey. N.O. Leguminosæ. The pretty little red seeds with black spots are called "Crabs' Eyes," and "Jequirity Seeds." Found in Queensland and Northern Australia.

This plant is not sufficiently abundant in Australia to affect stock to an appreciable extent, but it is interesting to observe that the Cattle Plague Commission of India (1877) in their Report, mentioned that a large number of the criminal cases of cattle-poisoning are effected through the agency of the seeds of this plant. More extended enquiry showed that this practice was common throughout the greater part of India. (Dymock.)

2. *ACACIA ANEURA*, and other species, *F. v. M.*, B. Fl., ii., 402. N.O. Leguminosæ. "Mulga," forming the chief ingredients of the scrub of that name. Found in all the Colonies except Tasmania.

The leaves are eaten by stock. In the Technological Museum are samples of wool from sheep fed exclusively on this shrub on a station in Western Queensland. The wool is not of the first quality, as might be expected, but it is very good. The following are some of the particulars of the wool:—

Wool of ewe hoggets (under 10 months' growth), average length of staple $2\frac{3}{4}$ inches.

Wool of wether hoggets (12 months' growth), average length of staple 4 inches.

Wool of 4-tooth ewes (18 months' growth), length of staple $6\frac{1}{4}$ inches.

3. *ACACIA DORATOXYLON*, *A. Cunn.*, B. Fl., ii., 403. N.O. Leguminosæ. "Spear-wood," a "Brigalow," "Currawang" or "Caariwan," "Hickory." Found in all the Australian Colonies except Tasmania and Western Australia.

The leaves are eaten by stock.

4. *ACACIA PENDULA*, *A. Cunn.*, B. Fl., ii., 383. Syn.: *A. leucophylla*, Lindl. N. O. Leguminosæ. "Weeping or true Myall." Called "Boree" and "Balaar" by the aboriginals of the Western Districts. Found in New South Wales and Queensland.

Stock are very fond of the leaves of this tree, especially in seasons of drought, and for this reason, and because they eat down the seedlings, it has almost become exterminated in parts of the Colony.

5. *ACACIA SALICINA*, *Lindl.*, B. Fl., vii., 367. Syn.: *A. ligulata*, *A. Cunn.* N. O. Leguminosæ. "Native Willow," and "Broughton Willow," near the Broughton River (Northern S.A.). Called "Cooba" or "Koobah" by the aboriginals of Western New South Wales, and "Motherumba" by those on the Castlereagh River, New South Wales. Found in all the Colonies except Tasmania.

The leaves are eaten by stock. This is another tree which is rapidly becoming scarce owing to the partiality of stock to it.

6. *ALBIZZIA BASALTICA*, *Benth.*, B. Fl., ii., 422. Syn.: *Acacia basaltica*, *F. v. M.* N.O. Leguminosæ. "Dead finish." Found in Queensland.

Cattle like the foliage of this tree.

7. *ANGOPHORA INTERMEDIA*, *DC.*, B. Fl., iii., 184. Syn.: *Metrosideros floribunda*, *Smith.* N.O. Myrtaceæ. "Narrow-leaved Apple-tree." Found in Victoria, New South Wales, and Queensland.

8. *ANGOPHORA SUBVELUTINA*, *F. v. M.*, B. Fl., iii., 184. Syn.: *A. velutina*, *F. v. M.* N. O. Myrtaceæ. "Broad-leaved Apple-tree." Found in New South Wales and Queensland.

The Rev. Dr. Woolls states that these "Apple-trees" are sometimes cut down to keep cattle alive in dry seasons, as the leaves are relished by them.

9. *ALBIZZIA LOPHANTHA*, *Benth.*, B. Fl., ii., 421. Syn.: *Acacia lophantha*, *Willd.*; *Mimosa distachya*, *Vent.*; *M. elegans*, *Andr.* N.O. Leguminosæ. Found in Western Australia.

Cattle browse on the leaves of this tree. It is, however, of rapid growth.

10. *APIUM LEPTOPHYLLUM*, *F. v. M.*, B. Fl., iii., 372. Syn.: *Helosciadium leptophyllum*, DC. N.O. Umbelliferae. "Wild Parsley." Found in Victoria, New South Wales, and Queensland.

Occasionally eaten by stock. It is worthy of note that this plant (in common with others of the genus) is sometimes arid and injurious when grown in damp soils. It is doubtless capable of much improvement by careful cultivation. This plant is not endemic in Australia.

11. *ATALAYA HEMIGLAUCA*, *F.v.M.*, B. Fl. i., 463. Syn.: *Thouinia hemiglauca*, *F. v. M.* N. O. Sapindaceae. "Cattle-bush," "White-wood." Found in South Australia, New South Wales and Queensland.

The leaves of this tree are eaten by stock, the tree being frequently felled for their use during seasons of drought.

12. *ATRIPLEX BILLARDIERI*, *Hook. f.*, B. Fl., v., 180. *A. crystallinum* in Muell. Cens., p. 30. Syn.: *A. crystallina*, *Hook. f.*; *Obione Billiardieri*, *Moq.*; *Theleophyton Billardieri*, *Moq.* N.O. Chenopodiaceae. A "Salt-bush." Several species of this genus are indigenous in England, where they go by the name of "Orache." Found in all the Colonies except Queensland and Western Australia.

This herb vegetates solely in salty coast-sands, which, like *Cakile*, it helps to bind, on the brink of the ocean and exposed to its spray. (Mueller.)

13. *ATRIPLEX CAMPANULATA*, *Benth.*, B. Fl., v., 177. N. O. Chenopodiaceae. "Small Salt-bush." Found in South Australia, New South Wales and Queensland.

Salt-bushes are so appreciated by stock that in many parts of the Colonies they are far less plentiful than they used to be. Unless flock-masters can see their way clear to keep their sheep &c., in certain paddocks, while the vegetation in others is endeavouring to recuperate, this kind of vegetation will continue to diminish, to the detriment of the pastoral industry. Greedy cropping of Salt-bush without any efforts at conservation is assuredly "killing the goose with the golden eggs." An analysis of this Salt-bush by Mr. W. A. Dixon, will be found *Proc. Royal Society N.S.W.*, 1880, p. 133.

14. *ATRIPLEX HALIMOIDES*, *Lindley*, B. Fl., v., 178. Syn.: *A. Lindleyi*, *Moq.*; *A. inflata*, *F.v.M.* N.O. Chenopodiaceae. A "Salt-bush." Found in all the Colonies except Tasmania.

Found over the greater part of the saline desert-interior of Australia, reaching the south and west coasts. A dwarf bush, with its frequent companion *A. holocarpum*, F.v.M., among the very best for salt-bush pasture. (Mueller.)

15. *ATRIPLEX NUMMULARIA*, *Lindley*, B. Fl., v., 170. N. O. Chenopodiaceæ. "Old-man Salt-bush," or "Cabbage Salt-bush." Found in all the Colonies except Western Australia and Tasmania.

One of the tallest and most fattening pastoral salt-bushes ; also highly recommended for cultivation as natural plants by close occupation of the sheep and cattle runs, have largely disappeared, and this useful bush is not found in many parts of Australia. Sheep and cattle depastured on salt-bush country are said to remain free of fluke and get cured of Diastoma disease and of other allied ailments. (Mueller.)

An analysis by Mr. W. A. Dixon will be found *Proc. Royal Society, N.S.W.*, 1880, p. 133.

16. *ATRIPLEX SEMIBACCATA*, *R. Brown*, B. Fl., v., 175. N. O. Chenopodiaceæ. A "Salt-bush." Found in all the Colonies except Tasmania.

A perennial herb much liked by sheep.

17. *ATRIPLEX SPONGIOSA*, *F.v.M.*, B. Fl., v., 179. Syn.: *A. semibaccata*. Mog., non R. Br. N. O. Chenopodiaceæ. Found through a great part of Central Australia, extending to the West Coast.

A useful salt-bush for culture.

18. *ATRIPLEX VESICARIA*, *Heward*, B. Fl., v., 172. N. O. Chenopodiaceæ. A "Salt-bush." Found in the interior of South-Eastern Australia, also in Central Australia and Western Australia.

Perhaps the most fattening and most relished of all the dwarf salt-bushes of Australia, holding out in the utmost extremes of drought, and scorched even by the hottest winds. Its vast abundance over extensive salt-bush plains of the Australian interior, to the exclusion of almost every other bush except *A. halimoides*, indicates the facility with which this species disseminates itself. (Mueller.)

19. *AVICENNIA OFFICINALIS*, *Linn.*, B. Fl., v., 69. Syn.: *A. tomentosa*, *Jacq.* N. O. Verbenaceæ. A "Mangrove" or "White Mangrove." The "Tchoonchee" of some Queensland

aboriginals, and the "Tagon-tagon" of those of Rockhampton (Queensland), and "Egaie" of those of Cleveland Bay. Found in all the Colonies (round the coast) except Tasmania.

The leaves of this tree are eaten by cattle, and are considered very nutritious.

20. *BARRINGTONIA ACUTANGULA*, Gaertn., B. Fl., iii., 288. Syn.: *Stravadium rubrum*, DC. N.O. Myrtaceæ. Found in Northern Australia.

Brandis, (*Forest Flora of India*) states that the bark of this tree, mixed with pulse and chaff, is given as cattle-fodder in India.

21. *BOERHAAVIA DIFFUSA*, Linn., B. Fl., v., 277. Syn.: *B. pubescens*, R. Br.; *B. procumbens*, Roxb. N.O. Nyctagineæ. Called "Goitcho" by the natives of the Cloncurry River, Northern Queensland. Found in all the Colonies except Tasmania.

The Rev. Dr. Woolls points this out as a useful forage plant, which, having a long tap-root, can withstand a considerable amount of drought, whilst it affords pasture early in the season ere the grasses are developed. This plant is not endemic in Australia. It is a troublesome weed in some warm countries.

22. *BULBINE BULBOSA*, Haw., B. Fl., vii., 34. Syn.: *B. australis* Spreng.; *B. suavis*, Lindl.; *B. Fraseri*, Kunth; *B. Hookeri*, Kunth; *Anthericum bulbosum*, R. Br.; *A. semibarbatum*, Hook. N.O. Liliaceæ. "Native Onion," "Native Leek." Found in all the Colonies except Western Australia.

Mr. W. N. Hutchison, Sheep Inspector, Warrego, Queensland, reports of this plant:—"Its effects on cattle, sheep and horses are almost the same—continually lying down, rolling, terribly scoured, mucous discharge from the nose of a green and yellowish colour. Cattle survive the longest; sheep take some three days, and horses will linger for a week." In *Plants injurious to Stock*, (Bailey and Gordon) two cases of poisoning are also instanced.

23. *BURSARIA SPINOSA*, Cav., B. Fl. i., 115. Syn.: *Itea spinosa*, Andr. N.O. Pittosporæ. "Native Box." Found in all the Colonies.

It is greedily eaten by sheep, but its thorny character preserves it from extinction upon sheep-runs. It is variable in bulk, usually a small shrub, in congenial localities it develops into a small tree.

24. *CASSIA EREMOPHILA* (nemophila), A. Cunn., B. Fl., ii., 287. Syn.: *C. canaliculata*, R. Br.; *C. heteroloba*, Lindl. N.O. Leguminosæ. Found in all the Colonies except Tasmania.

Mr. S. Dixon states that both the pods and leaves of this plant are eaten by stock.

25. *CASTANOSPERMUM AUSTRALE*, *A. Cunn.*, B. Fl. ii., 275. N.O. Leguminosæ. "Moreton Bay Chestnut," "Bean-tree." Called "Bogum" and "Irtalie," by the aborigines. Found in Northern New South Wales and Queensland.

Stockowners are destroying this tree owing to the belief that cattle are poisoned through eating the seeds. They are however quite harmless when cooked, and form, in fact, part of the diet of the aborigines.

The Government Analyst of New South Wales has failed to find an alkaloid or poisonous principle in the seeds, and suggests that they may be injurious on account of their indigestibility. (*Report of Dept. of Mines, N.S.W.*, 1886, p. 46). It is however, to be borne in mind that the Leguminosæ are emphatically a poisonous Natural Order, although they yield some of the most valuable foods of man and beast.

26. *CASUARINA STRICTA*, *Ait.*, B. Fl., vi., 195. *C. quadrivalvis* in Muell. Cens., p. 22. Syn.: *C. quadrivalvis*, Labill.; *C. macrocarpa*, *A. Cunn.*; *C. cristata*, *Miq.*; *C. Gunnii*, *Hook. f.* N.O. Casuarineæ. "Coast She-oak," "Swamp Oak," "River Oak." "Worgnal" of the aborigines. Found in all the Colonies except Queensland and Western Australia.

Mr. S. Dixon states that in Port Lincoln (S.A.), the fallen catkins (male inflorescence), form the chief sustenance in winter on much of the overstocked country.

The foliage is eagerly browsed upon by stock, and in cases of drought these trees are pollarded for the cattle. Old bullock-drivers say that cattle prefer the foliage of the female plant (i.e. those plants with the fruit-cones) to that of the male. (*J. E. Brown.*) *Casuarina* foliage has a pleasant acidulous taste, but it contains a very large proportion of ligneous matter.

Mr S. Dixon (*op. cit.*) states that this tree is too sour to be very useful to ewes rearing lambs, but if sheep had only enough of it, the "braek" or tenderness of fibre, would often be prevented in our finer wool districts, and much money saved by the increased value a sound staple always commands.

27. *CASUARINA SUBEROSA*, *Otto. et Dietr.*, B. Fl., vi., 197. Syn.: *C. leptoclada*, *Miq.*; *C. mæsta*, *F.v.M.* N.O. Casuarineæ. "Erect She-oak," "Forest Oak," "Swamp Oak," "River Black-oak," "Shingle Oak," "Beef-wood." "Dahl-wah" of the aborigines. Found in all the Colonies except South and Western Australia.

A very valuable fodder-tree ; largely used and much valued in the interior districts as food for stock during periods of drought. The same remarks apply more or less to all species of *Casuarina*.

28. CEDRELA TOONA, *Roxb.*, B. Fl., i., 387. *C. australis* in Muell. Cens., p. 9. Syn.: *C. australis*, F.v.M. N.O. Meliaceæ. Ordinary "Cedar." Called "Polai" by the aborigines of northern New South Wales, "Mumin" or "Mugurpul" by those about Brisbane, and "Woota" by those about Wide Bay, Queensland. Found in New South Wales and Queensland.

The leaves are used to feed cattle in India. (Gamble.) It should be observed however, that Baron Mueller differs from Bentham in considering the Australian "Cedar" specifically distinct from the "Toon" of India. In any case, the trees are so closely related that any property possessed by the one is shared by the other.

29. CLAYTONIA POLYANDRA, *F.v.M.*, B. Fl., i., 172. Syn.: *Talinum polyandrum*, Hook. N.O. Portulacææ. "Coonda" of the aborigines about Shark's Bay, Western Australia. Found in the interior of New South Wales, South, Western, and Northern Australia.

Sheep can largely feed on this succulent shrub for a considerable time without drinking water. (Mueller and Forrest, "*Plants indigenous about Shark's Bay, W.A.*," 1883). The same observation is doubtless true of the other *Claytonias*, and also of the closely related *Portulaca oleracea*, the common Purslane.

30. CHIONANTHUS RAMIFLORA, *Roxb.*, B. Fl., iv., 301. *Mayepea ramiflora*, F.v.M. in Muell. Cens., p. 92. Syn.: *C. effusiflora* F.v.M.; *Linociera effusiflora*, F.v.M.; *L. ramiflora*, DC.; *Mayepea ramiflora*, F.v.M. N.O. Jasmineæ. Found in Queensland.

The fruit of this plant is the food of the Jagged-tailed Bowerbird (*Prionodura Newtoniana*). (Bailey.) This observation is interesting, and is the more valuable in that the vegetable foods of our indigenous fauna have very rarely been botanically determined. This plant is not endemic in Australia.

31. CLAYTONIA (Calandrinia) BALONNENSIS or BALONENSIS, *Lindl.*, B. Fl., i., 172. N.O. Portulacææ. "Munyeroo of natives of South Australia. "Periculia" of natives of Central Australia. (*Fragm.*, x., 71.) Found in South Australia, New South Wales and Queensland.

Mr. S. Dixon states that a large mob of cattle, destined to stock a Northern Territory run, travelled some 200 miles without a

drink, which would have been altogether impossible in the absence of this succulent plant.

32. *CONOSPERMUM STÆCHADIS*, *Endl.*, B. Fl., v., 375. Syn.: *C. sclerophyllum*, Lindl. N.O. Proteaceæ. Found in Western Australia and New South Wales.
33. *CONOSPERMUM TRIPLINERVIUM*, *R. Brown*, B. Fl., v., 374. Syn.: *C. laniflorum*, Endl., *C. undulatum*, Lindl. N.O. Proteaceæ. Found in Western Australia.

Baron Mueller suggests that these plants be tried on the worst desert country, as all kinds of pasture animals browse with avidity on the long, tender and downy flower-stalks and spikes, without touching the foliage, thus not destroying the plant by close cropping.

34. *CUCUMIS TRIGONUS*, *Roxb.*, B. Fl., iii., 317. Syn.: *C. pubescens* Hook.: *C. jucundus*, F.v.M.; *C. picrocarpus*, F.v.M. N.O. Cucurbitaceæ. "Boomarrah" of the aboriginals of the Cloncurry River, North Queensland. Found in New South Wales, Queensland, Northern and Western Australia.

Stock are said to be very fond of this plant in the Western districts of Queensland. (Bailey). Sir Thomas Mitchell speaks of this plant covering a great area of ground, in one of his journeys in western New South Wales.

35. *DAUCUS BRACHIATUS*, *Sieb.*, B. Fl., iii., 376. Syn.: *Scandix glochidiata*, Labill. N.O. Umbelliferæ. "Native Carrot." Found in all the Colonies.

Stock are very fond of this plant when young. Sheep thrive wonderfully on it where it is plentiful. It is a small annual herbaceous plant growing plentifully on sandhills and rich soil, the seeds, locally termed "carrot burrs," are very injurious to wool, the hooked spines, with which the seeds are armed, attaching themselves to the fleece, rendering portions of it quite stiff and rigid. The common carrot belongs of course to this genus, and the fact that it is descended from an apparently worthless, weedy plant, indicates that the present species is capable of much improvement by cultivation. This plant is not endemic in Australia.

36. *DAVIESIA* spp. N. O. Leguminosæ. "Hop-bush." Found chiefly in Western Australia, but also in New South Wales and other Colonies.

Some of these shrubs are called "hop-bushes" on account of the pleasant bitter principle which pervades them. Horses and cattle are fond of browsing on them.

37. *DODONÆA LOBULATA*, *F.v.M.*, B. Fl., i., 479. N.O. Sapindaceæ.
 "Hop-bush." Found in Southern and Western Australia,
 New South Wales and Victoria.

One of the best fodder shrubs in the Lachlan district of New South Wales. The seed pods in particular contain a very pleasant bitter. There is no reason to suppose that this particular species is preferred by stock to any other of the genus, only I have not seen it recorded that sheep, cattle, &c., have actually been observed to browse upon any other, with the exception of *D. viscosa*.

38. *EREMOPHILA LONGIFOLIA*, *F.v.M.*, B. Fl., v., 23. Syn.:
Stenochilus longifolius, R. Br.; *S. salicinus*, Benth.; *S. pubiflorus*, Benth. N. O. Myoporineæ. "Emu-bush,"
 "Dogwood." "Berrigan" of the natives. Found in all the
 Colonies except Tasmania.

The leaves are greedily eaten by cattle and sheep. Observations in regard to the effect on stock browsing upon plants belonging to the *Myoporineæ* are much needed, as statements hitherto made in respect to them are not always reconcilable. Mr. S. Dixon states that this tree is one of the first to be barked by rabbits.

39. *EREMOPHILA MACULATA*, *F.v.M.*, B. Fl., v., 29. Syn.:
Stenochilus maculatus, Ker.; *S. racemosus*, Endl.; *S. curvipes*
 Benth. N. O. Myoporineæ. Called "Native Fuchsia" in
 parts of Queensland. Found in all the Colonies except
 Tasmania.

This is considered poisonous by some, and by others a good fodder-bush.

It does not appear to be dangerous to stock accustomed to eat it, but to others, travelling stock particularly, Mr. Hutchison of Warrego, (Q.) considers it to be deadly. The effects of this plant are always worst after rain. It appears to be most dangerous when in fruit. (Bailey & Gordon.)

40. *EREMOPHILA MITCHELLI*, *Benth.*, B. Fl., v., 21. N. O.
 Myoporineæ. "Rosewood" or "Sandalwood." Found in
 New South Wales and Queensland.

The leaves are eaten by stock. The seeds of several species are eaten by Emus.

41. *EUCALYPTUS CORYNOCALYX*, *F.v.M.*, B. Fl., iii., 218. Syn.:
E. cladocalyx, *F.v.M.* N. O. Myrtaceæ. "Sugar Gum."
 Found in South Australia.

The sweetish foliage of this tree is browsed upon by cattle and sheep; in this respect this Eucalypt may be classed with one other—*E. Gunnii*. (J. E. Brown.)

42. *EUCALYPTUS GUNNII*, *Hooker f.*, B. Fl., iii., 246. Syn.: *E. ligustrina*, Miq.; *E. acervula*, Hook. f. N. O. Myrtaceæ. "White Swamp Gum" or "Cider Gum." It possesses some other vernacular names. Found in Tasmania, the extreme south-eastern portion of South Australia, thence to Gippsland, and into New South Wales as far as Berrima.

This tree also bears the name of the "Sugar Gum," because of the sweetness of the leaves, which consequently are browsed upon by stock. It is a common tree in Tasmania, where it is called "Cider Gum," as an excellent cider is made from the sap taken from it in the spring-time.

43. *EUCALYPTUS PAUCIFLORA*, *Sieb.*, B. Fl., iii., 201. Syn.: *E. coriacea*, A. Cunn., (the species name in B. Fl.); *E. plebophylla* F.v.M.; *E. submultiplinervis*, Miq.; *E. piperita* var. *pauciflora* DC., and *E. procera*, Dehn. (perhaps). N. O. Myrtaceæ. "White Gum," "Drooping Gum." It is sometimes called "Mountain Ash." It possesses other vernacular names. Found in Tasmania, Victoria and New South Wales.

The leaves of this tree are very thick, and in dry seasons are eaten by cattle. (Woolls.)

Opossums have a predilection for the young foliage of this tree, so that they often kill trees of this species.

44. *EUPHORBIA ALSINÆFLORA*. *Baill.*, B. Fl., vi., 49. N. O. Euphorbiaceæ. Found in Northern Australia.

This plant is said to be a dangerous poison-herb to sheep. The natural order is emphatically a poisonous one.

45. *EUPHORBIA DRUMMONDII*, *Boiss.*, B. Fl., vi., 49. N. O. Euphorbiaceæ. Called "Caustic creeper" in Queensland. Called "Milk plant" and "Pox plant" about Bourke. Found throughout the Colonies.

This weed is unquestionably poisonous to sheep, and has recently (Oct. 1887) been reported as having been fatal to a flock near Bourke, N.S.W.

It has been observed that when eaten by sheep in the early morning before the heat of the sun has dried it up, it is almost certain to be fatal. It is seldom eaten except by travelling sheep, and when grass is scarce. Its effect on sheep is curious. The head swells to an enormous extent, being so heavy that the animal cannot support it, and therefore drags it along the ground; the ears get much swollen and suppurate. (Bailey & Gordon.)

Following is Mr. S. Dixon's remarks on this plant:—"A friend of mine fed some old ewes on the undoubtedly poisonous *E.*

Drummondii, but could not kill them, although he had often lost an odd sheep or two from poison, and no other known poisonous plant exists on his property."

46. *EUPHORBIA EREMOPHILA*, *A. Cunn.*, *B. Fl.*, v., 52. Syn.: *E. deserticola*, *F.v.M.* N.O. Euphorbiaceæ. Found in all the Colonies except Tasmania.

This plant should be perhaps placed in the "Suspected" list. In the western interior some people say it is highly poisonous, others, as usual, say that they have seen sheep eat it with not the least injurious result. Mr. Bauerlen gathered a quantity of this plant for the Technological Museum and appended the following note: "The plants I send I gathered in a horse-paddock. There was plenty of evidence on the plants that horses or cattle browse on it, but no injurious result is recorded at the station."

47. *FICUS GLOMERATA*, *Willd.*, *B. Fl.*, vi., 178. Syn.: *F. vesca*, *F.v.M.*; *Covellia glomerata*, *Miq.* N.O. Urticææ. "Clustered fig." Found in Queensland and Northern Australia.

The leaves are used in India for cattle and Elephant fodder. (*Gamble, Manual of Indian Timbers.*)

48. *FLAGELLARIA INDICA*, *Linn.*, *B. Fl.*, vii., 10. N.O. Liliaceæ. "Lawyer Vine." Found in New South Wales, Queensland and Northern Australia.

Leichhardt, *Overland Journey to Port Essington*, p. 424, speaks of his bullocks feeding heartily upon this plant, particularly as the country was most wretched, and the grass scanty and hard.

This plant is not endemic in Australia.

49. *FLINDERSIA MACULOSA*, *F.v.M.*, *B. Fl.*, i., 389. *Flindersia Strzeleckiana*, *F.v.M.*; *Elæodendron maculosum*, *Lindl.*; *Strzeleckya dissosperma*, *F.v.M.* N.O. Meliaceæ. "Spotted tree," "Leopard tree." Found in northern New South Wales and Queensland.

During periods of drought sheep become exceedingly fond of this tree, which they greedily devour, as well as the twigs up to the size of a goose-quill, and hence the tree is in danger of extermination as it has not the recuperative power of some trees.

50. *GASTROLOBIMUM* spp., especially *G. obovatum*, *Benth.*, *G. trilobum*, *Benth.*, *G. spinosum*, *Benth.* (syn. *G. Preissii*, *Meissn.*) *G. oxylobioides*, *Benth.*, *G. calycinum*, *Benth.*, *G. callistachys*, *Meissn.*, (syn. *G. lineare*, *Meissn.*) *G. bilobum*, *R. Br.*; *B. Fl.* ii., 101-7. N.O. Leguminosæ. Commonly known as "Poison bushes." At the Blackwood River, according to

Oldfield *G. calycinum* is known as the "York Road Poison bush." Found in Western Australia.

These plants are dangerous to stock, and are hence called "Poison-bushes." Large numbers of cattle are lost annually in Western Australia through eating them.

"The finest and strongest animals are the first victims: a difficulty of breathing is perceptible for a few minutes, when they stagger, drop down, and all is over with them. After the death of the animal the stomach assumes a brown colour; and is tenderer than it ought to be; but it appears to me that the poison enters the circulation, and altogether stops the action of the lungs and heart.* The raw flesh poisons cats, and the blood, which is darker than usual, dogs; but the roasted or boiled flesh is eaten by the natives and some of the settlers without their appearing to suffer any inconvenience." (Drummond, in Hooker's *Journal of Botany*.)

"The blossoms are also frequently eaten by animals, and are, I think, the most poisonous part, for the greatest number of sheep are lost from the poisonous effect of this plant at the period of its inflorescence. When the seeds fall on the ground, the wild pigeons greedily feed and fatten on them; if the crops of these pigeons, containing the seeds, be eaten by dogs, they die, yet the pigeons themselves when dressed, are good food, and at that season are eaten in large numbers by the settlers. Horses, so far as is known are not effected by it, at least this is the prevailing opinion, although it is disputed by some of the settlers." (T. R. C. Walter, in *Pharm. Journ.*, vi., 311.)

With sheep who have eaten the herb the best treatment has been found to be to fold them, or shut them up in a close yard, so closely packed that they can hardly move, and to keep them thus without food for thirty-six hours. See an interesting account in *Pharm. Journ.*, vi., 311.

In the *Flora Australiensis*, a statement is quoted that *G. bilobum* is the worst of the "Poison shrubs." Certainly some of them render extensive tracts of country unoccupiable.

51. GASTROLOBIUM GRANDIFLORUM, F.v.M., B. Fl., ii., 103. N.O. Leguminosæ. "Wall-flower or Desert Poison-bush. Found in Queensland and Northern Australia.

With one exception, this is the only *Gastrolobium* out of Western Australia, and it is the only Queensland one. Baron Mueller identified this plant as having poisoned large numbers of cattle and sheep on the Cape River, and at the sources of the

* See also an interesting account of some physiological experiments to ascertain the nature of the poison. *Pharm. Journ.*, vi., 312.

Burdekin and Flinders Rivers in 1863-4. He recommends frequent burning off on the stony ridges it frequents with the view to its suppression or eradication.

52. *GEIJERA PARVIFLORA*, *Lindl.*, B. Fl., i., 364. Syn.: *G. pendula*, *Lindl.* N.O. Rutaceæ. "Wilga," "Sheep-bush," "Dogwood" and "Willow." Found in all the Colonies except Tasmania.

Mr. S. Dixon states that sheep only are particularly fond of this bush, and it seems quite unaffected by droughts.

53. *GERANIUM DISSECTUM*, *Linn.*, B. Fl., i., 296. *G. carolinianum* in *Muell. Cens.* p. 13. Syn.: *G. pilosum*, *Forst.*; *G. parviflorum*, *Willd.*; *G. philonothum*, *DC.*; *G. potentilloides*, *L'Hér.*; *G. australe*, *Nees*; *G. carolinianum*, *Linn.* N.O. Geraniaceæ. "Crowfoot," "Terrat" of the aboriginals of the Coranderrk Station Victoria. Found throughout the Colonies.

This plant is known and highly prized as a very superior pasture herb. It is very plentiful during the spring time of good seasons on the sandhills. The seeds—which ripen about the end of September—are very injurious to sheep and wool, and, when this plant is plentiful, often cause the death of numbers of sheep, and if the shearing is late injure the wool to a very great extent. The seeds, which have exceedingly sharp, hard, barbed points, readily attach themselves to wool or the skins of sheep, whilst the spiral shaft with the long crank attached gives the whole the action of an auger worked by the movements of the animal or the action of the winds. If the point of one of these seeds is struck lightly into the sand on a windy day it will soon bury itself up to the base: this is how the seeds are planted by nature. Injurious as this plant is, it has its redeeming points, for it is one of our most nutritious fodder plants, all kinds of stock being exceedingly fond of it, and when cut in a green state and before the seeds mature it makes excellent hay. This plant is not endemic in Australia.

54. *GOMPHOLOBIUM UNCINATUM*, *A. Cunn.*, B. Fl., ii., 46. N.O. Leguminosæ. Found in New South Wales.

This small shrub is noteworthy as being very hurtful to sheep that may eat of it. (*Treasury of Botany.*)

South Australia is quoted (*op. cit.*) as its habitat, but this is a mistake.

55. *GOSSYPIUM STURTII*, *F.v.M.*, B. Fl., i., 222. Syn.: *Sturtia gossypoides*, *R. Br.* N.O. Malvaceæ. Found in South Australia and New South Wales.

This plant affords stock a good summer food. (Dixon.)

56. *HETERODENDRON OLEÆFOLIUM*, *Desf.*, B. Fl. i., 469. N.O. Sapindaceæ. "Emu Bush," "Jiggo" and "Behreging" are aboriginal names. Found in all the Colonies except Tasmania.

The seeds which are dry, are eaten by emus. Mr. S. Dixon states that both sheep and cattle feed greedily upon it.

57. *HIBISCUS HETEROPHYLLUS*, *Vent.*, B. Fl., i., 212. Syn.: *H. grandiflorus*, *Salisb.* N.O. Malvaceæ. "Green Kurrajong." "Dtharang-gange" is an aboriginal name. Found in New South Wales and Queensland.

The leaves, branches and bark of this tree are greedily eaten by cattle in winter. They are mucilaginous, in common with other plants of this natural order.

58. *JACKSONIA SCOPARIA* var. *MACROCARPA*, *R. Br.*, B. Fl., ii., 60. *J. cupulifera*, in *Muell. Cens.*, p. 34. Syn.: *J. cupulifera*, *Meissn.* N. O. Leguminosæ. "Dogwood." Found in Western Australia.

Cattle and horses relish the foliage of this small tree amazingly. (Mueller.)

59. *KOCHIA APHYLLA*, *R. Br.*, B. Fl., v., 188. Considered by Baron Mueller to be a variety of *K. villosa*, (*Muell. Cens.* p. 30). N.O. Chenopodiaceæ. A Salt-bush. Found in all the Colonies except Tasmania.

"All kinds of stock are often largely dependent on it during protracted droughts, and when neither grass nor hay are obtainable I have known the whole bush chopped up and mixed with a little corn, when it proved an excellent fodder for horses. One drawback it has, its stems being very fibrous, and the older portions indigestibly so, it is the principal cause of those bezoars or felted knobs in the manipulus of the sheep, which in very protracted droughts kill them by hundreds. When, however, the rains come, and soft herbage is abundant, these bezoars either partially dissolve or become covered with a shiny black coating, so that they resemble a papier-maché ball."

60. *KOCHIA PYRAMIDATA*, *Bentham*, B. Fl., v., 186. N. O. Chenopodiaceæ. "Blue-bush." Found in South Australia, Victoria, and New South Wales.

An analysis of this Salt-bush by Mr. W. A. Dixon is to be found in *Proc. Royal Society, N.S.W.*, 1880, p. 133.

61. *KOCHIA VILLOSA*, *Lindl.*, B. Fl., v., 186. Syn.: *K. tomentosa*, *F.v.M.*; *K. pubescens*, *Moq.*; *Maireana tomentosa*, *Moq.* N.O. Chenopodiaceæ. Found in all the Colonies except Tasmania.

A valuable salt-bush which withstands a very high temperature.

But Mr. S. Dixon (op. cit.) states that this species is "hateful" to stock. See *K. aphylla*.

62. *LOTUS AUSTRALIS*, Andr., B. Fl., ii., 188. Syn.: *L. lævigatus*, Benth.; *L. albidus*, Lodd. N.O. Leguminosæ. Found in all the Colonies.

63. *LOTUS CORNICULATUS*, Linn. N.O. Leguminosæ. Found in all the Colonies except Western Australia and Queensland.

These plants are often reputed poisonous in Australia, which is doubtless a mistake, as they make excellent fodder, and are considered valuable ingredients in meadows and pastures. (Bailey.)

Doubtless this idea has arisen owing to the poisonous nature of some leguminous bushes similar in leaf and habit. Baron Mueller however states (*Trans. R. S., Victoria*, Vol. vi., 1861-4) that this plant causes sheep to perish in some cases, in half-an-hour.

The most contrary evidence as to the effect of these plants on stock is to hand from Western New South Wales.

"I am inclined to believe that many leguminous plants reputed to be poisonous are not really so, but that an excess of either foliage or seeds eaten by a hungry animal throws off such an abundance of gases, that "hoove," which is nothing more than an excessive distension of the stomach, pressing against the diaphragm, preventing the lungs from working, and the animal is really strangled to death. To this cause I attribute all the deaths (and they are very numerous) caused by *Lotus australis* var. *Behrii*, really an excellent fodder plant, akin to the Lucernes, but when seeding, and especially after rain, if hungry sheep are allowed to feed greedily upon it, they die by hundreds, while sheep in confinement and fed solely upon it do not die, but actually thrive as was shown some years since in Adelaide." (S. Dixon, op. cit.)

64. *MALVASTRUM SPICATUM*, A. Gray, B. Fl., i., 187. Syn.: *Malva spicata*, Linn.; *M. ovata*, Cav.; *M. timorensis*, DC.; *M. brachystachya*, F.v.M. N.O. Malvaceæ. Found in South Australia, New South Wales and Queensland.

Some squatters have considered this a valuable sheep-herb. (Bailey.) This plant is not endemic in Australia.

65. *MARSILEA QUADRIFOLIA*, Linn., B. Fl., vii., 683. Syn.: *M. Brownii*, A. Braun; *M. angustifolia*, R. Br.; *M. hirsuta*, R. Br.; *M. Drummondii*, A. Braun. N.O. Marsiliaceæ. "Clover Fern." Found in all the Colonies except Tasmania.

This plant is much relished by stock. It grows plentifully in swamps and shallow pools of water. It is however better known as yielding an unsatisfactory human-food in its spore-cases.

66. MYOPORUM DESERTI, A. Cunn., B. Fl., v., 5. Syn.: *M. dulce*, Benth.; *M. strictum*, A. Cunn.; *M. patens*, A. Cunn.; *M. rugulosum*, F.v.M. N.O. Myoporineæ. "Ellangowan Poison Bush" of Queensland. "Dogwood Poison-bush" of New South Wales. Found in all the Colonies except Tasmania.

This appears to be a well authenticated poison-bush, but apparently only when in fruit. It is reported from Ellangowan, Darling Downs, Queensland, and out of a flock of 7,000 sheep passing Yandilla, (Q.) 500 succumbed to eating this plant. (Bailey and Gordon.)

67. MYOPORUM PLATYCARPUM, R. Br., B. Fl., v., 7. Syn.: *Disoon platycarpus*, F.v.M. N. O. Myoporineæ. "Dogwood," "Sandalwood." Found in all the Colonies except Victoria and Queensland.

The leaves are eaten by stock, but not as far as I can learn, with any evil effects. It is often felled for sheep in time of drought.

68. NICOTIANA SUAVEOLENS, *Lehm.*, B. Fl., iv., 469. Syn.: *N. undulata*, Vent.; *N. Australasiæ*, R. Br.; *N. rotundifolia*, Lindl.; *N. fastigiata*, Nees. N.O. Solaneæ. "Native Tobacco." Found in all the Colonies except Tasmania.

This plant grows luxuriantly on the sand-hills in the Riverina district (New South Wales) in good seasons. It used in the early days of the Colony, and in the interior districts up to quite recent years, to be manufactured into tobacco. It is readily eaten by stock.

69. PIMELEA HÆMATOSTACHYA, *F. v. M.*, B. Fl., vi., 22. N.O. Thymeleæ. Found in Queensland.

This very handsome plant might with advantage be introduced into garden culture, but it is one of the worst of poisonous herbs, and often causes the loss of hundreds of sheep, yet their lives could perhaps be saved by slitting their ears soon after they had eaten the herb. (Bailey.)

70. PITTOSPORUM PHILLYRÆOIDES, *DC.*, B. Fl., i., 112. Syn.: *P. angustifolium*, Lodd. N.O. Pittosporeæ. Called variously "Butter-bush," "Willow tree," "Native Willow," and "Poison-berry tree." Found in all the Colonies except Tasmania.

In times of scarcity this tree is of great value, as it withstands drought, and sheep and cattle browse upon its foliage. Stock are so partial to it in the interior districts that it is in danger of extermination in parts, and it is a tree which should be conserved.

71. *PLANTAGO VARIA*, *R. Br.*, B. Fl., v., 139 (where see synonymy).
Syn.: *P. debilis*, Nees. N.O. Plantagineæ. Found in all the Colonies.

This plant is relished by stock. Speaking of an allied species (*P. lanceolata*), an English writer observes:—"Its mucilaginous leaves are relished by sheep, and, to a certain extent, by horses and cattle, but it seldom answers as a crop, unless on very poor land where little else will grow. It was generally sown with clover, and this mixed crop is occasionally seen now on barren soils; but there can be little doubt that the plantain is inferior in produce, and probably in nutritive qualities, to many plants that would grow equally well on the same land. Mingled with grasses in permanent pasture, it may be beneficial in small quantity, but tends, like all broad-leaved plants, to destroy the more delicate herbage around it."

72. *POMADERRIS RACEMOSA*, *Hook.*, B. Fl., i., 421. N.O. Rhamneæ.
Found in all the Colonies except Western Australia and Queensland.

The leaves when chewed or soaked are found to be slightly mucilaginous; this explains the fondness that stock have for this plant. It always seems fresh and green, and stands stocking well. (S. Dixon.)

73. *PSORALEA TENAX*, *Lindl.*, B. Fl., ii., 193. N.O. Leguminosæ.
Found in New South Wales and Queensland.

Considered a good fodder by some. (Bailey.)

74. *PTERIGERON ADSCANDENS*, *Benth.*, B. Fl., iii., 533. N.O. Compositæ. Found in Queensland and Northern Australia.

Specimens of this plant have been frequently sent to Brisbane as a poison herb. (Bailey.)

75. *RHOGODIA* spp., B. Fl., v., 151, et seq. N.O. Chenopodiaceæ.
"Salt-bushes."

The plants are palatable to sheep and cattle on account of the salt which they contain, nearly two ounces having been obtained from two pounds of leaves; and they are all more or less useful, but the two following are perhaps best known.

76. RHAGODIA BILLARDIERI, *R. Brown*, B. Fl., v., 152. Syn.: *R. baccata*, Moq.; *R. Candolleana*, Moq.; *Chenopodium baccatum*, Labill. N.O. Chenopodiaceæ. Found in all the Colonies.

This is an important bush for binding moving sand on sea-shores. (Mueller.) It is eaten by stock.

77. RHAGODIA PARABOLICA, *R. Br.*, B. Fl., v., 153. Syn.: *R. reclinata*, A. Cunn. N.O. Chenopodiaceæ. "Salt-bush." Found in all the Colonies except Tasmania.

This plant is relished by stock.

78. SARCOSTEMMA AUSTRALE, *R. Br.*, B. Fl., iv., 328. N.O. Asclepiadeæ. Called "Caustic Plant" or "Caustic Vine" in Queensland; "Gaoloowurrah" by the aborigines at Port Darwin. Found in all the Colonies except Victoria and Tasmania.

In the Warrego District, Queensland, a great number of fat cattle have perished from eating this plant. The death of sheep from eating it is also well authenticated. (Bailey & Gordon.)

Yet Mr. J. Dixon stated he had not known stock to touch this plant till the summer of 1880-1, when the cattle on the eastern plains of South Australia lived upon it, without water, for some months of continued drought. (*Proc. R.S., S.A.*, iv., 136.)

79. SCLEROLÆNA BICORNIS, *Lindl.*, B. Fl., v., 195. *Bassia bicornis* in Muell. Cens., p. 30. This must not be confounded with the Sapotaceous genus *Bassia* of Linn., which are usually large trees. (*Genera Plantarum*, Benth. & Hook., ii., 658.) Syn.: *Chenolea bicornis*, (*Vide Proc. R.S.*, 1880); *Kentropsis lanata*, Moq.; *Anisacantha bicornis*, F. v. M.; *Bassia bicornis*, F. v. M. N.O. Chenopodiaceæ. "Cotton-bush." Found in all the Colonies except Tasmania and Western Australia.

[N.B.—In Mr. Dixon's paper the name is given as *Chenolea bicornis*. There is no such species. It is probably intended for *Sclerolæna bicornis*.]

An analysis of this salt-bush by Mr. W. A. Dixon is in the *Proc. Royal Society, N.S.W.*, 1880, p. 133.

80. SESBANIA ÆGYPTIACA, *Pers.*, B. Fl., ii., 212. Syn. *Æschynomene sesban*, Linn. N.O. Leguminosæ. "Ngeenjerry" of the aborigines of the Cloncurry River (North Queensland). Found in Northern Australia.

The leaves and branches are cut for cattle-fodder in India. (Gamble.)

81. *SIDA RHOMBIFOLIA*, *Linn.*, B. Fl., i., 196. N.O. Malvaceæ.
 "Common Sida weed," "Queensland hemp." Called "Paddy Lucerne" in the Clarence and Richmond River Districts of New South Wales. It is often called "Native Lucerne" in other parts of the Colony. Found in New South Wales to Northern Australia.

It may not be generally known that the ripe carpels of this weed often cause the death of fowls that feed on them, by the sharp terminal arms of the carpels irritating the inside and causing inflammation. (F. M. Bailey.)

The leaves are mucilaginous, as are also the tops, and cattle are very fond of them. They are however unable to destroy the plants, by reason of the very strong fibre in the stems.

82. *SOLANUM EREMOPHILUM*, *F. v. M.*, B. Fl., iv., 459. N.O. Solanaceæ. Found in the interior of New South Wales and South Australia.

Between Cobham and Mount Arrowsmith (New South Wales), an old drover stated that he has repeatedly seen sheep and cattle die after eating this pretty blue and purple plant.

83. *SOLANUM SIMILE*, *F. v. M.*, B. Fl., iv., 448. Syn.: *S. laciniatum*, var., R. Br.; *S. fasciculatum*, *F. v. M.* N.O. Solanaceæ. Found in all the Colonies except Tasmania and Queensland.

Sheep feed on this plant. (Annie F. Richards, in *Proc. R.S., S.A.*, iv., 136.)

84. *STERCULIA DIVERSIFOLIA*, *G. Don.*, B. Fl., i., 229. *Brachychiton populneum* in Muell. Cens., p. 15. Syn.: *Brachychiton populneum*, R. Br.; *Pæcilodermis populnea*, Schott. N.O. Sterculiaceæ. "Kurrajong" or "Black Kurrajong." The "Bottle-tree" of Victoria. Found in Victoria, New South Wales, and Queensland.

Cattle and sheep are fond of the leaves and branches, and in some dry seasons have existed for long periods on scarcely anything else. In parts of the Riverina (New South Wales) the trees are cut down as required for this purpose. (*General Report, Sydney International Exhibition, 1879.*)

85. *SWAINSONIA* spp., B. Fl., ii., 216, et seq. N.O. Leguminosæ. Native Indigos.

These plants are reputed poisonous to stock. The active principle does not appear to have been isolated, as it only exists during certain stages of growth (prior to flowering) of the plant, and it seems to be decomposed on drying the plant. The real

nature of the poison will therefore probably remain undetermined until such time as a chemist can work at the plant on the spot, or take steps to receive a perfectly fresh supply of it.

86. *SWAINSONIA GAGLEGIFOLIA*, *R. Br.*, *B. Fl.*, ii., 217. Syn.: *S. Osbornii*, Moore; *Vicia galegifolia*, Andr.; *Colutea galegifolia*, Sims. N.O. Leguminosæ. "Darling Pea." "Indigo Plant." Found in New South Wales and Queensland.

This is a dreaded plant from the great amount of loss it has inflicted on stock-owners. Its effect on sheep is well known; they separate from the flock, wander about listlessly, and are known to the shepherds as "pea eaters," or "indigo eaters." When once a sheep takes to eating this plant it seldom or never fattens, and may be said to be lost to its owner. The late Mr. Charles Thorn, of Queensland, placed a lamb which had become an "indigo eater" in a small paddock, where it refused to eat grass. It however ate the indigo plant greedily, and followed Mr. Thorn all over the paddock for some indigo he held in his hand. At Taroom (Q.) horses were hobbled for the night at a place where much of this plant was growing. On the following morning they were exceptionally difficult to catch, and it was observed how strange they appeared. Their eyes were staring out of their heads, and they were prancing against trees and stumps. The second day two out of nine died, and five others had to be left at the camp. When driven they would suddenly stop, turn round and round, and keep throwing up their heads as if they had been hit under the jaw; they would then fall, lie down for a while, rise, and repeat the agonizing performance. On one station in the course of a few weeks, eight head were shot, having injured themselves past all hope of recovery. (*Plants Injurious to Stock*, Bailey and Gordon.)

The Rev. Dr. Woolls, however, points out (*Proc. Linn. Soc., N.S.W.*, vii., 315) that from experiments made near Mudgee, New South Wales, it does not appear that this species is deleterious when eaten with other herbage.

87. *SWAINSONIA GREYANA*, *Lindl.*, *B. Fl.*, ii., 216. Syn.: *S. grandiflora*, *R. Br.* N.O. Leguminosæ. "Poison bush." Found in South Australia, Victoria, New South Wales, and Queensland.

This plant is reported to cause madness, if not death itself, to horses. The poison seems to act on the brain, for animals affected by it obstinately refuse to cross even a small twig lying in their path, probably imagining it to be a great log. Sometimes the poor creatures attempt to climb trees, or commit other eccentricities. (Woolls.) It is regarded with great horror on

the Darling, especially in dry seasons when other herbage fails. Baron Mueller believes in the poisonous properties attributed to this particular species. (*Trans. R. V., Victoria*, Vol. vi., 1861-4.) It would appear to be very similar in its effects to the preceding species.

"I may add that this plant is popularly supposed to produce a sort of insanity, ending in some cases in death, in stock that feed upon it. I am of opinion that this is incorrect; I have never seen any stock actually feeding upon it, but I have seen horses eat freely, without any evil effect, of another species of the same genus (?) which grows plentifully on the black soil flats which are at times inundated by the waters of the Darling. The Hon. William Macleay, who has had large experience in a district where this plant grows, informed me a few days ago that he also was of opinion that it is not poisonous to stock." (H. R. Whittel, in *Proc. Linn. Soc., N.S.W.*, ix., 179.) As testimony in regard to the properties of *S. Greyana* this is a little vague, but I have given it verbatim.

88. *TEPHROSIA PURPUREA*, Pers., B. Fl., ii., 209. Syn.: *T. piscatoria*, Pers., and others. N.O. Leguminosæ. Found in South Australia, New South Wales to Northern Australia.

These species possess properties deleterious to stock. The latter was reported from the Flinders River, Queensland, as a poison herb. (Bailey and Gordon.) *T. rosea*, F. v. M., is also poisonous.

89. *TRACHYMENE AUSTRALIS*, Benth., B. Fl., iii., 349. *Didiscus pilosus* in Muell. Cens., p. 62. Syn.: *Didiscus pilosus*, Benth.; *D. anisocarpus*, F. v. M.; *D. grandis*, F. v. M.; *Dimetopia anisocarpa*, Turcz.; *D. grandis*, Turcz. N.O. Umbelliferæ. "Wild Parsnip." Found in all the Colonies.

Recently (December, 1887) the sudden death of numbers of cattle in the vicinity of Dandenong, Victoria, was attributed to their having eaten a plant known as the wild parsnip. Baron Mueller pronounced specimens forwarded to him by the Chief Inspector of Stock to belong to this species. Its action is so powerful that no remedial measures seem to be of any avail. The only way to destroy the plant is to pull it up by the roots and burn it.

90. *TREMA ASPERA*, Blume, B. Fl., vi., 158. (This, and other species of *Trema* recorded by Benthams, are all united by Baron Mueller under the typical *T. cannabina*, Lour. Vide

Muell. Cens., p. 21.) Syn.: *Celtis aspera*, Brong.; *Sponia aspera*, Planch. N.O. Urticeæ. "Peach-leaved poison bush," "Elm," "Rough fig," a "Kurrajong." Found in all the Colonies except South and Western Australia.

This shrub is firmly believed by some to be poisonous. It is likely very indigestible, as it produces an excellent strong fibre. (Bailey.)

91. *TRICHODESMA ZEYLANICUM*, *R. Br.*, B. Fl., iv., 404. *P. zeylanica* in Muell. Cens., p. 100. Syn.: *Pollichia zeylanica*, F. v. M. N.O. Boragineæ. Found in all the Colonies except Victoria and Tasmania.

Baron Mueller recommends this plant as a fodder herb, saying that the dromedaries of Giles' Exploring party (1873-4) were found to be particularly partial to it. It is not endemic in Australia.

92. *TRIGONELLA SUAVISSIMA*, *Lindley*, B. Fl., ii., 187. N.O. Leguminosæ. From its abundance in the neighbourhood of Menindie it is often called "Menindie Clover." It is the "Australian Shamrock" of Mitchell, and the "Calomba" of the natives of the Darling. Found in the Interior of Australia, from the Murray River and tributaries to the vicinity of Shark's Bay, Western Australia.

This perennial, fragrant, clover-like plant is a good pasture herb. Sir Thomas Mitchell (Three Expeditions) speaks of it in the highest manner as a forage plant on several occasions.

93. *VENTILAGO VIMINALIS*, *Hook.*, B. Fl., i., 411. N.O. Rhamneæ. "Supple Jack." "Thandorah" of the aborigines of the Cloncurry River (North Queensland). Found in South Australia, New South Wales, and Queensland.

The leaves are eaten by stock.

94. *ZIZYPHUS JUJUBA*, *Lam.*, B. Fl., i., 412. N.O. Rhamneæ. "Jujube tree." Found in Queensland.

The leaves are much valued for cattle-fodder in India. (Brandis.)



Maiden, J. H. 1888. "Indigenous Australian forage plants, (non-grasses) including plants injurious to stock." *Journal and proceedings of the Royal Society of New South Wales* 22, 204–226. <https://doi.org/10.5962/p.359048>.

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