

THE PEACH LEAF POISON BUSH, *TREMA ASPERA* BLUME: ITS OCCASIONAL TOXICITY.

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(Read before the Royal Society of Queensland, 29th November, 1920).

Concerning many plants recorded as poisonous or injurious to stock in Australia there is much diversity of opinion among stockowners. As a case in point may be cited *Trema aspera*, common in the eastern states and variously known as "Peach-leaf Poison Bush," "Wild Peach," "Peach Poison," etc. This plant is regarded by some as a good and safe forage plant, but by others as one of our worst poisonous plants.

There are numerous references to *Trema* as a dangerous fodder in the writings of Australian botanists. The bark is very fibrous, and it has been held that the harmful effects attributed to the plant are due to its tough and indigestible nature when ingested by stock in the absence of softer and more palatable feed; this especially in view of the fact that the plant belongs to a family of plants—the Ulmaceae—the members of which as a general rule are quite wholesome and free from poisonous properties. This is the opinion of Bailey and Gordon¹, and of Ewart², though the latter states that Ferd. von Mueller recorded the plant as poisonous. Maiden^{3, 4} records the plant as believed poisonous by many stockowners, but personally expresses no opinion on it. It is referred to by Creshoff⁵ as a suspected poison plant in Australia. Bancroft⁶ states that the most carefully made extracts of both the green and dried plant were not bitter nor did they have any effect on frogs. W. D. Francis⁷ writing of weeds and scrub-undergrowth eaten by stock in a south-eastern dairying district (Kin Kin) during drought periods, states that *Trema* is extensively eaten but very few if any losses in the district have been caused by it. Cleland⁸ quotes Shepherd (N.S.W. Med. Gaz. 11. 1871, 74) as saying that the plant is alleged poisonous to goats and cattle in Queensland but though frequently eaten in New South Wales no ill effects are noticed.

Hydrocyanic Acid in Trema aspera.—Recent observations of the writers would, however, definitely show that the plant is at times capable of producing mortality in stock, and is worthy of the reputation imputed in the popular naming.

The closely allied *Trema timorensis* Blume (Syn. *T. virgata* Blume, *Sponia virgata* Planch) is recorded as cyanophoric in Greshoff's original lists^{9 10}. In course of a survey of the Queensland Flora made by us¹¹ for the occurrence of prussic acid (cyanogenetic glucosides), the occasional presence of faint traces of this poison in *Trema aspera* was noted. Latterly (March, 1920) in connection with an enquiry into cases of fatality among stock in the Beaudesert district, Southern Queensland, portions of *Trema aspera* were gathered which evidenced the presence of an amygdalin-like glucoside both in the "bitter-almond" odour when the leaves were rubbed between the hands and also by pronounced positive reactions in the usual test made with Guignard's soda picrate paper. The record of tests (Guignard reaction) on specimens of *Trema* from various localities is as follows:—

Date.	Name of Plant.	Locality.	Presence of Hydrocyanic Acid.
30/6/17	<i>Trema aspera</i>	Ithaca Creek	Faint positive
28/5/18		Sunnybank	Faint positive
16/6/18		Moreton Bay	Negative
30/6/18		Ithaca Creek	Negative
13/2/20		Beenleigh	Negative
22/2/20		Beaudesert	Fairly strong positive
23/2/20		Beaudesert (second test confirmatory)	Fairly strong positive
6/3/20		McPherson Range ..	Negative
30/3/20		Marmor	Negative
29/1/18	<i>Trema aspera</i> var. <i>viridis</i>	Malanda	Negative
29/1/18	<i>Trema amboinensis</i> ..	Malanda	Negative

The transitory appearance of hydrocyanic acid has been noted by Greshoff¹² in *Hydrangea* and certain ferns, and its periodicity in economic plants of the *Sorghum* group is well-known.

Similar occurrence of the poison, as here shown, in *Trema aspera* in sufficient amount in certain situations or at certain seasons is in accord with the sporadic and sudden fatalities occasionally observed among stock grazing where the plant is abundant.

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- On account of the faint positive reactions recorded for the plant at the time it was not here recorded as definitely cyanophoric.
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Smith, Frank B. and White, C. T. 1921. "The Peach-leaf Poison Bush. *Trema aspersa*, Blume: Its Occasional Toxicity." *The Proceedings of the Royal Society of Queensland* 32, 132–134. <https://doi.org/10.5962/p.351466>.

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