

# Communications

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## Brief technical articles, comments on prior articles and book reviews

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The following was brought to our attention by Barry Sturman. It originally appeared in *Quarterly Journal and Transactions of the Pharmaceutical Society of Victoria*, Vol. 1, No. 3 (1858) pp 119–120.

### CORRESPONDENCE.

#### GRASS TREE GUM—(AUSTRALIAN DRAGON'S BLOOD)

Letter from Dr. McCrea, Chief Medical Officer. C. M. O. Office, Melbourne, 23rd May, 1858.

Sir,—The accompanying specimens of gum, from the grass tree, have been transmitted to me, and I shall be glad if you will bring them before the Pharmaceutical Society, with the view of testing their properties.

I have the honor to be,  
Your obedient servant,  
W. McCREA,  
CHIEF MEDICAL OFFICER.

#### The Secretary of the Pharmaceutical Society

##### ANSWER TO THE ABOVE.

Pharmaceutical Society's Office, 3 Commercial Chambers, Swanston Street, Melbourne, 17th June, 1858.

Sir,—In reply to your letter, accompanying some specimens of gum from the grass-tree, growing in Gipps' Land, which I had the honor to receive on the 23<sup>rd</sup> day of May 1858, I beg to inform you that I, on the first opportunity, laid the gum before the Council of the Pharmaceutical Society, as intimated in your letter.

The Council having commissioned me to make a careful chemical examination of the gum, I now beg to communicate to you the result of the investigations on its properties.

The gum originates from *Xanthorrea Australis* Rob. Brown, which occurs abundantly in Gipps' Land, and, on several ranges of mountains in this colony. It resembles so much, in every respect, dragon's blood that it might be called Australian dragon's blood. The dark-brown globulous, nutmeg-sized lumps, are very

brittle, and easily rubbed up into a saffron-yellow powder.

The gum is not soluble in water or turpentine, sparingly or partly in fatty oils, but very readily in diluted spirits of wine and ether. The solution in spirits of wine forms a splendid varnish, or lac, which appears to be useful for many purposes.

When heated to about 200 degrees the gum melts, and fumes arise of a peculiar, but very agreeable smell similar to benzoin and styrax, owing to an etherial oil, benzoic and cinnamic acid. With the alkalies it unites, very readily, to the production of combinations very soluble in water; with the earthy and metallic bases the gum combines also.

The most important and interesting chemical results are obtained by treating the gum with nitric acid, as well in a scientific as an industrial point of view. If on one part of the gum in powder be poured 10 or 12 parts of nitric acid, a violent effect takes place, and the gum soon disappears. After boiling for about half-an-hour, the brown color of the solution at first produced is changed into deep yellow and is then evaporated, in a vapor bath, to dryness. In this way; about fifty per cent of the very important chemical substance, picric acid, may be obtained from the gum used, mixed with a small quantity of oxalic and nitro-benzoic acid.

For purification, the picric acid is combined with potash; the resulting salt crystallized once or twice, and, finally, decomposed by muriatic acid. The picric acid (sparingly soluble in water) is redissolved in spirit, and made to crystallize.

I have the honor to forward you a sample of the acid so prepared.

Besides the scientific interest attaching to this substance, picric acid is a most valuable yellow dye for silks and wools, which it colors of any tint from a light straw to a brilliant canary.

Picric acid has a very remarkable bitter taste, and has been recommended as a remedy in intermittent fever.

The Society owes to you the sincerest thanks for having drawn its attention to a substance which promises such interesting results to science and to industry.

I have the honor to be, sir,  
Your most obedient servant,  
JOHN KRUSE, Sec. Phar. Society.

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