CALCAREOUS DEPOSIT IN HIERONYMA ALCHORNEOIDES, Allem. The following note may be of interest to readers of the 'Annals of Botany':—

ROYAL BOTANIC GARDENS, TRINIDAD,
Jan. 19, 1888.

DEAR SIR,

I send you by this mail a piece of wood from the trunk of a Euphorbiaceous tree (*Hieronyma alchorneoides*, Allem.). In it and on the outside is a curious deposit, called by the native sawyers 'stone.' This material is a great nuisance to them, as it blunts their saws. The wood is a very useful one, and is known locally as Tapanâ—Tapanare in Spanish. My attention was called to this deposit by Mr. C. W. Meaden, Superintendent Convict Depôt, Chaguanas, who does considerable timber cutting. Considering it to be worth examination I asked the Government to allow an analysis to be made by Mr. McCarthy, the results of which are given below.

Calcium as carbonate (Chalk)	85·81
Loss on ignition, woody fibre and some carbonic acid gas	5·06
Insoluble in acids	·76
Alumina, including phosphates and iron . .	8·37
Total	100·00

Mr. McCarthy further remarks, 'In my opinion the land on which the "Tapanâ" tree in question was grown contained a fair proportion of lime. This lime was dissolved by the rain water containing carbonic acid gas, and the solution was subsequently assimilated. During the circulation of the sap and at a certain height an outlet was reached[1], when the gas essential to the dissolving the lime parted company with the solution, and as a result the lime was deposited as it is on the inside of a boiler or tea-kettle.'

The deposit occurs in cracks or fissures which may be caused by the action of the air or may be caused by the concussion when the tree is felled to the ground.

The fact, however, would appear to be new[2] that wood should make

[1] Fissures caused by fall probably.—J. H. H.

[2] Deposits of phosphate of lime in teak are well known (Quart. Journ. Chem. Society, Vol. xv. p. 91).—W. T. T. D.

a deposit on the surface and in the cells of the tree which contains 85·81, or nearly 86 per cent. of calcium carbonate.

(Signed) J. H. HART,
Superintendent.

D. Morris, Esq., M.A.

As an addendum to the report upon the exudation upon 'Tapana' wood I should mention that the soil near which the tree was grown contained on analysis the following :—

Moisture at 212 F.	1·24
Water of combination and organic matter	3·86
Oxides of iron and alumina with phosphates	·08
Lime	7·73
Sulphuric Acid	·15
Magnesia	Traces
Potash	·18
Soda	·10
Silica, sand, &c.	Traces
	86·74
Total	100·00

W. T. THISELTON DYER, Kew.

ON THE POWER OF CONTRACTILITY EXHIBITED BY THE PROTOPLASM OF CERTAIN PLANT CELLS.—In a communication to the Royal Society (see Roy. Soc. Proc., No. 240, 1886), I gave some account of the principal changes which take place in the gland-cells and stalk-cells of *Drosera dichotoma* during secretion, and later I gave a preliminary account (see Roy. Soc. Proc., No. 260, 1887) of certain experiments and observations which were undertaken in order to attempt to ascertain by what mechanism the bending of the tentacles is made possible in *Drosera*, and what changes occur in the tentacle-cells. I hope shortly to publish a full account of my observations in the 'Annals of Botany,' but in the meantime the following note, which is almost a reprint from the Roy. Soc. Proc., will indicate the line of my work.

During actual movement no obvious histological changes can be detected in the cells of the bending portion, but when the tentacle has become well inflected, it becomes apparent that the cells of the