Cryptomeria japonica, 29 inches in circumference, or 9 inches in diameter; 24 feet high; 7 years old.

Wellingtonia gigantea, 30 feet in circumference, or 10 inches in diameter; 16 feet high; 4 years old.

Eucalyptus globulus, Blue Gum, 3 feet 10 inches in circumference, or 1 foot 3 inches in diameter; about 60 feet high; 6 years old.

Platanus orientalis, Plane, 21 inches in circumference, or 7 inches in diameter; 3 years 10 months old.

Poplus dilatata, or Lombardy Poplar, 3 feet 7 inches in circumference, or 1 foot 2 inches in diameter; about 50 feet high; 9 years old.

The last two sorts were grown out of cuttings. In the measurement of the various trees I have omitted fractions.

2. "On the Ignorance of the Ancient New Zealanders of the Use of Projectile Weapons," by W. Colenso, F.L.S. (*Transactions*, p. 106.)

Mr. Sturm remarked that he personally knew of the first introduction in (the East Coast of) New Zealand of the very toy-arrow described by Mr. C. Phillips in his paper, which took place at Poverty Bay in 1850, where Mr. Sturm was then (and for some time previous) a resident. In that year a young man, "who had been a great voyager and traveller, and who spoke several languages," joined Captain Harris' whaling station party in Poverty Bay, and *he* first made there this toy-arrow for the Maori lads, and taught them its use—as a plaything. The idle Maoris took to the novelty (as they mostly do) and made many. Mr. Sturm had not yet seen Mr. Phillips' description of the toy-arrow, but fully described the same and its manner of use, offering, indeed, to make some of them, and his whole account closely agreed with the description given by Mr. Phillips, with one exception, that Mr. Sturm never knew of any *set mark* having been struck by it.

3. "Further Notes* on *Danais berenice*." In a letter from Mr. F. W. C. Sturm to the Honorary Secretary, Hawke Bay Philosophical Institute. (*Transactions*, p. 305.)

SEVENTH MEETING. 14*th October*, 1878.

The Right Rev. the Bishop of Waiapu, Vice-president, in the chair.

1. "Memoranda of a Journey in which he succeeded in crossing the Ruahine Mountain Range, with Notes on the local Botany and Topography of that District," (Part II.) by W. Colenso, F.L.S.

At the close, Dr. Spencer proposed, and Mr. J. A. Smith seconded, a unanimous vote of thanks to Mr. Colenso for his very interesting paper, which was also earnestly supported by the Right Rev. Chairman, and warmly accorded by the meeting, with a further particular wish, that the same should be recorded.

2. "On certain New Zealand and Australian Barks useful for Tanning Purposes," by J. A. Smith.

---

* See Trans. N.Z.I., Vol. X., p. 276.

With regard to tanning barks in New Zealand, I beg to remark on the indigenous trees, and also the imported, the cultivation of which would prove highly remunerative, a desirable industry for the Colony, and a good export.

The native trees which contain tannin are (1) the Tawero, synonymous with Towai (*Weinmannia racemosa*, Forst). (2) Whinau, (3) Toatoa, (4) Tawai, (5) Makomako, Yellow Kowai, and others.

The tannin in our New Zealand Trees certainly does not abound, but it is amply made up for by the introduction of the numerous varieties of the *Acacia* from Australia.

The whole tribe of *Acacia* medicinally contains a valuable astringent, consequently tannin more or less in the various species of which now more than 300 sorts are known to science. Those of which the bark for tanning is used in Australia are but few sorts, such as are large growing trees, and of easy access. The undermentioned are commonly used in different parts of Australia and New Zealand, and exported in considerable quantities to England :—

The first is generally known as the Silver Wattle (*dealbata*), now so plentiful in the North Island; also the *falcata*, the *melanoxylon*, or black-wood, and the *mollissima*, woolly-leaved. All these are to be seen in Napier gardens.

I am informed that in Victoria, the Silver Wattle seed is sown there as a speculation; that in three years the trees are worth £5 per acre—the bark for tanning purposes, the wood for fuel. The great advantages of these trees is, that when the seed is once sown, it does not require renewal, as it is supplied in the future by suckers from the roots and falling seed.

The value of *Acacia* bark for tanning purposes in New Zealand is about £8 per ton.

If these trees were planted along our railway lines where they are fenced, it would no doubt be a large source of revenue, and amply repay the outlay; they would also prove shelter from the sun, the wind, and the dust. The *Acacia* has already been tried with advantage in Algeria, and the Home authorities intend cultivating it in the island of Cyprus.

Mr. Colenso related the *first* use of the barks of New Zealand trees for tanning purposes, which took place at Ngunguru (between Whangarei and the Bay of Islands), in the years 1839, 1840, and 1841, which had come under his special notice while living at the Bay of Islands, and often travelling in that district. This was the *first* place in New Zealand where hides were tanned for leather, the whole process was particularly primitive. Extracts of those several barks there used, with specimens of the trees producing them, he had sent to Sir W. J. Hooker, the Director of the Royal Gardens at Kew, long before New Zealand became a British Colony.