gist will find it impossible to classify by the means of such smaller sub-divisions." (Sir Rod. Murchison, Siluria, p. 51.)

Ideal Distribution of Genera in Time from independent or widely-separated geographical centres.

On the hypothesis that all organic genera did not arise and radiate repeatedly from one geographical centre only, and that a considerable space of time would be consumed in the greater extremes of distribution as regards terrestrial plants of higher organisation, the following diagram is designed, roughly illustrating the possible complication arising out of the radiating distribution of genera from widely-separated centres; and also illustrating the different nature of the possible associates to be met with at different stations should the survivals succeed in reaching a middle station or the antipodes of the place of their generic origin.

The cross dotted lines indicate the possible lapse of geological time between the commencement and close of the migration of each genus, and also the curious interweaving of different genera which originated in centres widely apart.

NOTES ON A RECENT CASE OF POISONING CAUSED BY THE EXHALATION OF RHUS RADICANS (TOXICODENDRON) AT THE BOTANICAL GARDENS, HOBART.

By F. Abbott, Superintendent Botanical Gardens.

A very peculiar case of poisoning, caused by plant exhalation, having occurred at these gardens, it is desirable that it should be recorded, not alone for general information, but more especially as it is possible that the plant in question may, to a limited extent, be under cultivation in other places.

Before describing the case, a few general observations relative to the matter may not be out of place.

The genus Rhus embraces numerous species, many of which produce gums and resins used in the manufacture of superior kinds of varnish. R. verincifera yields the very best japan varnish; others are rich in tannic matter, and are esteemed for the preparation of leather, while not a few of the species are poisonous to a greater or less degree, R. pumila, of Upper Carolina, being the most pernicious of them. A case is reported where the mere gathering of seeds from this species resulted in the poisoning of the whole body, and produced lameness, which lasted for a considerable time. Rhus

venenata and R. radicans are also poisonous to some persons, but not to all alike. The latter of these species, Rhus radicans, is the plant which caused the poisonous effects described in these notes.

The plant is common in North America, where it is known as poison ivy. The air impregnated with its volatile exhalations is capable of poisoning many persons, more especially in hot weather, causing a kind of violent erysipelas, accompanied by erysipelatous eruptions. Some persons are wholly unaffected by it, and a case is given where one member of a family could handle the plant with impunity, while another would be affected by mere proximity alone without contact. Persons of irritable temperaments are said to be more susceptible than others.

The particular plant in question has been in the garden for many years. I am unable to say how it was obtained, or whether more were received at the same time or not. For some thirty years it has occupied the same position in the gardens, and for a long time was without specific name, being known as Rhus species. Later, on examination, I believed it to be Rhus radicans, the only doubt in the matter being that it had not, so far as I was aware, exercised any poisonous effects at any time.

The natural habit of the plant is to spread and root on the ground like ivy, but it is capable of climbing up any support that it may happen to be near, even to the top of high trees. Being of rapid growth, it soon forms a large clump on the ground; the plant now under consideration was about 6ft. in height, and covered upwards of a rod of ground. To restrict it to these dimensions it became necessary from time to time to considerably reduce it, these reductions at times amounting to about one-third of the whole; the plant, therefore, has hitherto been freely handled without, so far as is known, having produced any ill-effects. I say so far as is known, because it is possible that it may have done so without the cause being suspected. The symptoms do not develop for some time after the influence has been exercised, rarely under 48 hours, being very similar to those of ordinary erysipelas they would be ascribed to an attack of that malady, and the cause producing them would not be suspected.

It is very probable that the plant may have a more poisonous influence at one season than another, and to this I am inclined to ascribe its effects in the present case, when six persons became poisoned by it at one time, two at least to a serious extent.

In the ordinary course of routine garden operations, any reduction or thinning necessary would have taken place earlier in the season, when the plant, which is deciduous, was

at rest. It having been decided to open up the square by reducing the number of plants growing on it, the work was deferred, as a matter of convenience, till a later period, and was not carried out till the 22nd September, when the plant was taken up, and destroyed by burning. On this date the sap was in full motion, and the plant had pushed freely, and was covered with young foliage. As the weather was warm at the time for the season of the year, the exhalations given off were, no doubt, greater than they would have been with the plant in a less active condition. This probably may account for its very pernicious effects at this particular time.

As stated above, six persons were poisoned to a more or less extent. The first to exhibit the symptoms was the overseer, Connor. The third day after contact with the plant his face became much swollen, but not such an extent as to prevent his continuing his occupation. The swelling gradually subsided, and he recovered in a few days.

The second man, Walsh, did not complain till the eighth day, when the face was swollen to such an extent that he could only see with difficulty. The arms and neck were covered with red blotches, and he had to leave his work and seek medical advice. The swelling continued for some time with formation of watery blisters about the wrists. By the eleventh day the symptoms had considerably abated, swelling going down, and skin peeling off the arms. He resumed work on the fourteenth day, having been laid up six. By this time the symptoms had subsided, with the exception of a dizziness of sight, which, though abating, still continues.

He states that the first symptoms he felt was about the third day. The arms commenced to feel stiff, and the head became sore to the touch, succeeded by an intolerable itching and profuse perspiration, which were followed by the swelling of the face and eruptions on the neck and arms.

About the same time, the eighth day, two of the men attached to the garden gang were exempted from work, their faces being swollen and systems generally affected. The case of one of the two assumed a serious aspect by the tenth day, when he was carried to the hospital, and was at first, I believe, considered in a somewhat critical condition. At the time of his admission the face was very much swollen, and fever symptoms high. Later, the chest and abdomen became completely covered by red inflamed blotches. From this time the symptoms began to abate, and on the ninth day from admission he was allowed to leave his bed for the first time, but still remains an inmate of the institution.

The other two cases were not of a severe character; in both, the arms only were affected. These became very irritable,

and broke out in red blotches and pustles, which, however, soon subsided.

It is worthy of remark that the hands, which, of course, would come into direct contact with the plant during the process of the work, did not appear to be affected in any way.

I have gone fully into the details of the case, as it is one of some interest, and one of rare occurrence out of North America, where the plant is indigenous; indeed, I am not aware of any similar case having occurred, more especially in the colonies. Therefore, as the facts connected with it are so clear, it is desirable that it should be placed on record.

I was present during the whole of the time occupied in taking up and burning the plant, passing to and fro between the plant and the fire, frequently handling portions of it as the work proceeded, without feeling its poisonous properties in any way, and at different times during the season I have handled it with impunity, especially in the autumn, when the falling leaves assume tints more effective than those of the Virginian creeper. At this season I have gathered the leaves by the handful without at any time being affected by it.

I need only add that if any of the medical men who may have attended the patients professionally will add their testimony, the case will be made more conclusive and interesting.

HISTORY OF AUSTRALIAN GEOGRAPHY, II—TASMANIA AND NEW ZEALAND ON THE DAUPHIN AND OTHER MS. MAPS.

By J. R. McClymont, M.A., Edin.

[The first of these papers appeared in the volume for 1885, p. 407, and should have been described "History of Australian Geography, I.—Edel's Land, De Witt's Land, and Carpentaria."]

On a recent occasion, when I had the honour of addressing this Society on the Portuguese Discovery of Australia, I anticipated the composition of this paper by stating that, in my opinion, no satisfactory explanation of the south-eastern portion of the Dauphin map (Add. MS. 5. 413. Brit. Museum) had been given. Mr. Major and Mr. Petherick have advanced conflicting opinions—a fact which may, perhaps, excuse my temerity in differing from so highly reputed an authority as theirs.

Mr. Major conjectures from the extreme length of the eastern coast line of Jave la Grande "that 'Baye Neufve'