



Telephone 730422

23 January 1976

375/1

Professor H E Maude 77 Arthur Circle FORREST ACT 2603

Dear Professor Mande,

OCEAN ISLAND PHOSPHATES : ROYALTY ACTION

As I mentioned to Mrs Maude on the telephone, I have now received a telegram from London giving the replies to the points in your letter to me of 3 January setting out the financial arrangements which seemed to be the minimum essential to meet your requirements. The terms of the telegram are as follows:

- (a) Through route open-ended first class tickets and stopovers agreed. Also stopover expenses and excess baggage for documents. (Your points (1), (2) and in your third paragraph).
- (b) London accommodation and breakfast, plus £5 for lunch and dinner agreed. Also £5 daily allowance, Canberra to Canberra, for incidental expenses as requested. (Your points (3) and (5)).
- (c) £200 maximum for clothing for you and Mrs Maude (and £100 maximum for Mr Macdonald) agreed. (Your point (4)).
- (d) £20 daily allowance to cover loss of income and personal accident insurance as requested: agreed. (Your points (6) and (7)).

(I might mention that the cost of Mr Macdonald's watchman and servant is agreed.)

I note that the telegram makes no mention of the question of the usual witness fees (if any) mentioned in your third paragraph; but assume that if there had been any difficulty about them, London would have mentioned it in their telegram.

/I confirm



I confirm that a member of the High Commission staff will inspect your house in your absence at least once a week; and that your mail will be forwarded by the High Commission, as you request.

London have asked that I make all bookings except that for Mr Macdonald's journeys from Suva to Nadi, and from Nadi to Suva. As I mentioned to your wife on the telephone I shall be happy to do this in accordance with whatever plans you may have drawn up after consulting the airline authorities.

Yours sincerely, Dichard Sands

R M SANDS

77 Arthur Circle, Forrest, A.C.T. 2603, 3rd January, 1976.

Mr Richard Sands, British High Commission, CANBERRA, A.C.T.

Dear Mr Sands,

## Ocean Island Phosphates: Royalty Action

In recent letters Mr N.D. Ing, Assistant Treasury Solicibor, has stated that Mr Vinelott is anxious that Mr P.D. Macdonald and I should, if possible, arrive in London early in February to give evidence in connexion with the above action, and suggests that, to save time and correspondence, the financial details relating to our visit should be settled direct with you. Mr Macdonald has agreed to this procedure.

The following financial arrangements would seem to be the minimum essential to safeguard us from financial loss as a result of our journeys to and from London and our stay there, having regard to our age and not very robust health and the fact that we shall have to leave the antipodes in mid-summer for a sojurn in England in mid-winter:-

- (1) Open-ended return 1st-class air tickets (not necessarily by the most direct route) from Canberra to London for my wife and myself.
- (2) Two stop-overs of a combined duration not exceeding 120 hours to be permitted on the journey to London, and the same provision on the return journey, with our expenses paid, including accommodation, meals, tips and transportation, and any other obligatory outlay involved.
- (3) The cost of accommodation and board in London.
- (4) A grant not to exceed £200 for the purpose of purchasing suitable winter clothing.
- (5) An allowance of £5 per diem from Canberra to Canberra to be provided for taxis, tips and other miscellaneous daily expenditure, in lieu of the presentation of an itemized daily expense account.
- (6) An allowance at the rate of £20 per diem for the period of our absence from Canberra to cover compensation for loss of income while away.
- (7) Personal accident insurance for £20,000, together with any medical and hospital expenses incurred, while away from Canberra.

The items listed above relate to my wife and myself jointly, and are subject to the understanding that I shall be entitled to the usual witness fees (if any); that any excess luggage charges occasioned by having to take documentation required for use in connexion with the action will be met; and that our house will be inspected at least once a week by a member of the High Commission staff and our mail forwarded by the High Commission (as tentatively agreed to by Mr Hewitt).

The same arrangements apply, mutatis mutandis, in the case of Mr Macdonald, except that his journey would be from Suva to London and return, and that he would require to be refunded the wages of a watchman (say £1.50 a night) and his domestic (say £40 a month). A reliable watchman is considered essential in view of the prevalence of housebreaking in Suva.

I should perhaps emphasize that the reason for the proviso in (1) is my present hope, health permitting, to return to Australia via South Africa, and that all expenses incurred as a result of any extension of our stay in England beyond the period for which our presence is required, or during stop-overs on the return journey beyond the 120 hours agreed upon, would be met by me, unless occasioned by illness, as would the cost of all visits to, or entertainment of, relatives and others. The allowances under (5) and (6) would not be considered as payable in respect of any voluntary extensions of our stay in England or elsewhere.

If the above be agreed to I suggest that the passages for Mr Macdonald, my wife and myself, and our accommodation at stop-overs on route to London, should be arranged by the High Commission in Camberra in consultation with us.

Yours sincerely,

H.E. Maude.

Copy to: Mr P.D. Macdonald, C.M.G., C.V.D., Suva, Fiji.

## Notes on the formation of Ocean Island; with special relation to the growth of trees on the Karrenfeld

- (1) Guano = excreta which, instead of undergoing bacteriological decomposition, has accumulated in deposits, which may contain specific minerals and may act in specific ways with the rocks with which it is in contact.
- (2) Nitrogenous quano contains a large part of the nitrogenous organic matter of the original excretion; whereas in phosphatic quano the organic nitrogenous fraction has been lost, leaving a material that usually consists of calcium phosphate minerals.
- (3) The persistence of guano rich in nitrogen is only possible under very dry conditions (southern Peru). Elsewhere decomposition, solution of both original and secondary constituents, and subsequent migration of the solutes give rise to various kinds of phosphatic guanos.
- (4) The geophysical conditions for the formation of guano deposits are: (a) a substratum of a suitable form to retain the deposit; and (b) rainfall not so great as to wash it away. I.e. the richest deposits are to be found on arid islands where the adjacent ocean is, or was, unusually fertile, particularly in the zone centered about lat. 20s: the 'On the Line' whaling grounds, which enjoyed a high biological productivity, due to upswelling on the southern edge of the Southern Equatorial Current, especially during periods of glacial and inter-glacial change.
- (5) Colonial sea birds, such as pelicans, boobies and cormorants, deposit the greater part of their droppings on the colonized land area, where the material is used in nest construction during the breeding season.
- (6) Ocean Island, according to Owen, was elevated in three stages (indicated by three raised beaches cut in the now dolomitized coral, when stripped of phosphate). This was when the pinnacles of the Karrenfeld were formed by subaerial dissection. Power argues for marine erosion which, however, Hutchinson considers unlikely.
- (7) The island was subsequently submerged, when dolomitization of the coral reef rock occurred, this being a metamorphic process involving the partial replacement of calcium in calcareous sediments by magnesium, in this case from sea water (see Riviere for the only observations of the method of dolomite formation under conditions likely to occur in the surface waters of the ocean.

- (8) Submergence was followed by emergence and colonization by birds, when the leached guano <u>phosphatized</u> the underlying coral rock. It is important to note that under the phosphate the coral is dolomitized (Hutchinson).
- (9) The emergence was slow and regular, so that the older and central relatively flat part of the island had a longer colonization, thus producing a thicker and more phosphatic deposit on what is now the Karrenfeld.
- (10) The dolomite rock, weathering greyish black, angular and rough, is (Bohne) easily distinguished from the smoother, rounder and light yellowish phosphate.
- (11) Hutchinson observes that the largest insular phosphatic deposits occur on uplifted islands of coral rock or with a considerable veneer of coral limestone. The phosphate occurs in the cavities of a strongly developed Karrenfeld cut in the elevated limestone, and where the latter has been submerged it has been found to be dolomized (Ocean, Makatea, Nauru, Christmas). Dolomitization of reef limestone unassociated with phosphatic deposits occurs on other Pacific Islands and phosphate may conceivably be found on undolomitized elevated reef rock, but it can hardly be accidental that the five largest deposits rest on dolomite. In the case of Ocean, Nauru and Makatea they were all submerged after the formation of the Karrenfeld.
- (12) Note the absence of good bearing coconut trees on the Karrenfeld of Nauru, where the tamano (or Itai), Calophyllum inophyllum, an excellent shade tree, does well in the phosphate pockets; and also that on Palmyra the coconut trees grow well on the drier, alkaline areas containing little organic matter but where there is no phosphatic hard-pan, but is replaced by the buka, Pisonia grandis, another fine shade tree, on the more acid areas over the phosphetized coral pan. It would seem probable that the Pisonia treas on Gardner are again not the best for growing coconuts, this being the experience of the colonists.
- (13) Coconut tree counts on Ocean Island (while essential for purposes of calculating compensation due to landowners) may disguise the fact that the trees on the Karrenfeld area are not only more scattered and sickly but do not bear well and are apt to be the first to cease bearing or even to die off in periods of drought.
- (14) The above statement is based not only on information obtained from the older islanders during the 1931 lands settlement, and from personal observation, but also on the statements of other European residents and visitors. For example, the trader John Webster, who visited Ocean Island in 1851, or half a century before the discovery

of the phosphate deposits, wrote that:-

There are three terraces, each distinctly and similarly marked; each of these terraces having at certain periods composed the coast line of the Island. Rocks, water-worn and preserved in fantastic shapes, jut out to a considerable height from the debris of coral forming the soil. As on the other Islands the soil is scanty, and the surface entirely covered with coral pebbles. Viewed from the sea these Islands present one dense mass of foliage, but on landing one is undeceived. The cocoa-nut trees grow at some distance from each other; but their wide spreading tops form a grateful canopy of shade from a vertical sun. The trees nearest the beach bear abundently and are the most luxuriant. The soil on these Islands is so scant that but little vegetation is found besides cocoa-nut trees. On the summit of Panapa there are stunted trees, with laurel-shaped leaves, and a few beautiful flowering shrubs. (My underlining).

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