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AIYURA RESEARCH STATION

by
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A major development in the Upper Ramu prior to 1942 was the establishment of an agricultural station at Aiyura. Its purpose, which was not officially defined at the beginning, was to test the viability of selected exotic plants under Highland conditions, particularly the commercial potential of cinchona, tea and coffee.⁽¹⁾ The Director to Agriculture at the time, George Murray, had difficulty starting the project. Not only was it his dream to develop commercial crops in the Highlands along Kenyan lines, an idea not popular with his colleagues in Rabaul,⁽²⁾ but his attempts to get cinchona and tea seed for trials met considerable opposition from established producers overseas. He overcame both obstacles in 1936 when he succeeded in smuggling a minute quantity of cinchona seed from Java,⁽³⁾ which supplied a reputed 90 per cent or more of the Dutch monopoly of the world market. The commercial derivative from the cinchona bark was quinine, at that time the only known preventive agent against malaria. Its use in New Guinea had increased, particularly since the opening of the Highlands, and it was "costing the Administration a considerable sum annually with the prospect of the demand continually increasing...."⁽⁴⁾ Thus Murray's proposed trials had become politically acceptable and in May 1936 he sent Bill Brechin to the Upper Ramu to put them into operation.

Brechin's first task was to set up nurseries at the patrol post and to plant the precious cinchona seed as well as some mouldy tea seed which Murray had obtained, also with much difficulty, from Fiji.⁽⁵⁾

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1. J.B. McAdam, Undated (1942 or 1943), Aiyura Agricultural Station Report, Part 1, Aiyura Files, op. cit. All references to Aiyura come from the Aiyura Files unless stated otherwise.
 2. D. Halliday, 1977, pers. comm. See also R.W. Robson, PIM, November 1946, p. 41.
 3. Ibid. Both Robson and Mrs. Halliday believe the seed came from Java, but early references make no mention of any seed from there, possibly for political reasons.
 4. McAdam, op. cit.
 5. Brechin's Annual Report, Aiyura, 1936/37.

The tea failed to germinate, but within two months 10,000 cinchona seedlings of "all varieties" were growing well - Brechin mentions several varieties of seed from "German East Africa" and Bengal.⁽⁶⁾ In August Brechin planted some coffee seed sent by Messrs Wilde and Lohmann of Wau,⁽⁷⁾ and soon after added castor oil plants (both native and foreign),⁽⁸⁾ a number of fruit and vegetable varieties as well as shade (for cinchona and coffee) and decorative trees, seeds and cuttings. Much of his stock came from the Rabaul Botanical Gardens and the Kerevat Agricultural Station, but some also came directly from Australia, Africa, India, China and Japan.⁽⁹⁾ Once the airstrip was opened at Aiyura, fragile specimens could be delivered with little delay and damage.⁽¹⁰⁾

As the seeds germinated and grew rapidly in the upland climate, Brechin had only a short time to choose a permanent site for a station. At first, land on the Efontera side of the patrol post was considered⁽¹¹⁾ but Brechin was not satisfied, and he patrolled through every major village around Kainantu noting soils, vegetation, altitude and land availability as well as the methods and products of village agriculture.⁽¹²⁾ Finally he selected the site still occupied by what is now called the Aiyura Highlands Agricultural Experiment Station, in a small valley ten kilometres south of Kainantu.⁽¹³⁾ The land, made up of a range of soils, rose from open grasslands at about 1500 metres above sea level and carried thick forest above 1800 metres. At the base, which until recently had been a buffer zone between Gadsup and Tairora villages, there was room for an airstrip. Aitchison negotiated for 2000 acres from the Aiyura, Onamunapa and Akenapa people who laid claim to the ground.

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6. From Amari Plantation, German East Africa (now Tanzania): varieties Cinchona hybrid, C. ledgeriana and C. succirura. From Government Cinchona Plantation, C. ledgeriana and C. succirura. From Government Cinchona Plantation, Munsong, Kalimpong, Bengal, India: varieties C. robusta, C. succirubra and C. ledgeriana. Records of growth are noted in the Aiyura files, op. cit.
 7. Entry 13 August 1936.
 8. Brechin, MR March 1937, quoted the current London price for castor oil at £4.13.9. per ton.
 9. Brechin gave an impressive list of the contents of his plant nursery in his report of March 1937.
 10. Brechin, 17 August 1937.
 11. Aitchison to District Officer, February 1937, letter in Aiyura Files.
 12. Brechin, Annual Report 1936/37, Aiyura Files.
 13. Memo of 12 April 1937, Aiyura Files.

Part payment was then made, but its purchase was not completed until 1948. ⁽¹⁴⁾

One aspect of the development of the agricultural station was the greater opportunities it offered to its Gadsup neighbours for trade and work. In April 1937 Brechin started clearing an airstrip site and preparing gardens for the Ramu seedlings which would need to be planted out as soon as the first rains came in September. He employed casual labourers from the Markham in addition to seven Amari men who walked to Ramu to offer their services and signed on for a one year contract. ⁽¹⁵⁾ Men from Aiyura and Akuna provided day labour for the airstrip. Eventually Brechin hoped to employ thirty-two men, including a "boss-boi" and a carpenter. Aiming for a stable long-term nucleus of staff, he included accommodation for twenty families in his estimates. ⁽¹⁶⁾ In April 1938 he employed eighteen indentured labourers from the Markham and twenty casual labourers from Bena Bena with additional casual help from twelve Akuna men. The lowland men did not adjust happily to the cold highland climate and after the redrawing of district boundaries the number of Markhams at Aiyura was greatly reduced, with a corresponding increase in Bena Bena recruits. In July 1938 there were ten indentured labourers from the Markham and forty-three casual workers from Bena Bena, plus up to fifty from the Gadsup or Ramu. ⁽¹⁷⁾ In July 1940, Siane men replaced the Benas. These men were from a remote part of the Chuave area in the ranges south of Bena Bena. Brechin described them as "the best yet, ... robust people vastly superior in intelligence and physique", and at the end of their term he showed his satisfaction by paying each with one highly prized gold-lipped shell. ⁽¹⁸⁾ This association between Aiyura and Siane has continued to the present day.

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14. R. Carne and A. Schindler pers. comm. Aub Schindler was in charge of Aiyura from 1944 to 1963 when he retired to grow coffee at Karanka Plantation between Arau and Karanka villages. Ron Carne, who had been at Aiyura since 1951, then took charge until his recent retirement.
 15. Entry 12 April 1937, *ibid.*
 16. *Ibid.*, 9 April 1937.
 17. *Ibid.*, MR April and July 1938. There is a record of payment to the Bena Benas on 31 June 1938: Each man received one tomahawk, large white cowrie (kumu kumu), 16 inch knife, taro knife, large mirror and five feet of lavalava material.
 18. *Ibid.*, MR October 1940. Of. Salisbury, 1962, *op. cit.*, p. 90. re Siane contract with Bena Bena and "outside world".

The cinchona seedlings thrived at Aiyura. In June 1939, the Public Health Department tested the prunings for quinine content but found they were not yet producing in economic quantities.⁽¹⁹⁾ In the following year the Australian pharmaceutical firm, Parke-Davis, asked for five hundredweight of bark for trial⁽²⁰⁾ but there is no record that this order was filled. Although the world quinine supply was greatly depleted after the Japanese occupation of Java, the Aiyura cinchona never supplied quinine for medical purposes.

Tea was pioneered at Aiyura. The first two trial batches from Fiji and British North Borneo gave poor results.⁽²²⁾ In March 1941, three pounds of Assam tea arrived from Queensland where it had been grown at South Johnstone since 1930,⁽²³⁾ and became the basis for the post-war plantings at Karanka, the first commercial tea plantation in the Territory.⁽²⁴⁾

Arabica coffee grew extremely well on the lower slopes at Aiyura. By 1940 Brechin was able to export 63 tons valued at £2060.0.0.⁽²⁵⁾ In the following year he built a fermentary to process the coffee cherries to the parchment stage.⁽²⁶⁾ Local villagers were impressed by the coffee and in May 1940 asked Brechin for seedlings for their own gardens.⁽²⁷⁾ This was an early record of what became an important village industry, largely derived from village initiative rather than European imposition. The Aiyura village fermentary set up after the war was probably the first of its kind.

19. MR June 1939, Aiyura Files.

20. MR February 1941, Aiyura Files.

21. R. Carne, 1968, pers. comm.

22. Aiyura Annual Report for 1938/39 and MR December 1940.

23. MR March 1940. Brechin notes the receipt of a new variety of tea from Queensland, which both Carne and Schindler (op.cit.) understand was from South Johnstone.

24. A. Schindler, pers. comm. Schindler still owns Karanka which for many years has been predominantly under coffee although some of the original tea still grows there and at Aiyura.

25. NGAR, 1939/40, par. 213.

26. MR May 1941, Aiyura Files.

27. MR May 1940, *ibid*.

Three other crops which became important after the war were tested at Aiyura in this period. Passionfruit gave high yields within a year of being planted in April 1938.⁽²⁸⁾ Pyrethrum, grown from seed flown from Kenya, also grew well and was ready for content analysis in December 1939⁽²⁹⁾ although no results were recorded. By June 1940 Brechin was harvesting ten pounds of pyrethrum flowers a month and as insecticides had become almost impossible to obtain, he investigated the possibility of processing the crop himself.⁽³⁰⁾ After his death in 1942 the rather insignificant daisy-like *Chrysanthemum* plant was unrecognised and lost, so that the post-war industry began from new stock. The third crop, Virginia Pipe tobacco - a native variety was already grown and smoked in New Guinea - was first planted in 1940⁽³¹⁾ but although initially successful, its cultivation also lapsed during the war. Experiments with mountain rice failed.⁽³²⁾

Although primarily a horticultural research station, Aiyura also carried a few animals. Peadar's zebu cross herd at Ornapinka and the Lutheran Mission cattle - later transferred to Aiyura after the last civilian evacuation in January 1943 - proved that cattle could graze satisfactorily on the natural grasslands, but Brechin did not go further than recommending suitable breeds for the Highlands,⁽³³⁾ experimenting with introduced pasture and the control of cattle tick by compulsory dipping of any animals driven through Ramu. The Aiyura stock consisted of several horses, a herd of goats, several Romney March awes and a ram, some pigs and a Berkshire boar.⁽³⁴⁾ The boar improved local strain of indigenous pigs, until some years later he disappeared without trace.

Apart from his concern with commercial agriculture, Brechin planted fifteen acres of sweet potato, selecting the best varieties

28. MR April 1938, *ibid.*

29. MR December 1939, *ibid.*

30. MR July 1940, *ibid.*

31. MR May 1940, *ibid.*

32. MR June 1940, *ibid.*

33. Brechin, R.F., 1937. Suitability of Upper Ramu area for the purposes of grazing sheep and cattle. New Guinea Agricultural Gazette 3 (2): 261.

34. E.g., MR October 1940.

for yield and palatability which he could find in the eastern Highlands. He encouraged labourers to take cuttings home with them as well as other vegetables, and distributed seeds and cuttings to missions on request. He noted that groundnuts (peanuts), cucumbers, butter beans, cabbages and other vegetables were gaining acceptance among the labourers and that local people were "very receptive to the introduction of new crops and improved varieties". Brechin found there was a market at Lae for any surplus vegetables which Aiyura or surrounding villages produced.⁽³⁵⁾ In 1940 he was sending out weekly air consignments of up to 300 pounds of vegetables which sold at twopence a pound, and which subsidised the employment of more local labourers.⁽³⁶⁾

From its beginning, Aiyura was not a self-contained establishment, but maintained a two-way relationship with its neighbours⁽³⁷⁾ which was an amicable one, except for one incident in which the Norakorans set fire to the station store.⁽³⁸⁾ As an employer Brechin was a source of trade goods and when drought led to poor crops he also distributed food in exchange for labour. Aiyura disseminated new knowledge and skills to those who came to work or observe. Through its pig-breeding programme, sweet potato experiments (see below) and distribution of new varieties of edible plants it influenced traditional patterns of activity. And indirectly its occupation of the former battle-ground put a seal on the truce between the Akuna, Tairora and Anona groups.

Shortage of money always clouded the horizon at Aiyura, and there was a period after the Rabaul eruption in August 1937 when Murray thought its funds might be diverted for rebuilding the capital. But Bill Brechin with his great skill for innovation and tremendous enthusiasm, managed with limited resources to extend Aiyura from just experimental work into an influential demonstration farm.

George Murray's vision of a "second Kenya" in the Highlands was opposed by those subscribing to the prevailing philosophy of "seeking to observe that established international principle which says that the country belongs to the indigenous inhabitants, no matter how primitive

35. L. Pursehouse, PR 30 October - 5 November 1939. D. Halliday, op. cit.

36. The Annual Reports to the league of Nations give the impression that this was the raison d'etre for Aiyura's continuing existence.

37. NGAR 1938/39, par. 231.

38. Aiyura Annual Report, 1939/40. Aiyura Files.

they be". (39) By 1938, PIM correspondents gave support to his ideas, making reference to European colonisation of the rich tablelands of central New Guinea "in spite of the apparent indifference of the Administration". One report indicated that several goldminers were preparing to plant coffee and soya beans on a commercial scale. (40) Sir Charles Marr, formerly Minister for External Territories, supported them in a speech to the Australian parliament. (41) In March 1939, a Madang correspondent pointed out that it was false to imagine that there were large tracts of surplus land in the Highlands as there were "already about 100,000 natives" living there. (42)

Meanwhile negotiations were allegedly under way to resettle Jewish refugees from Nazi Europe in the central New Guinea Highlands. Besides being "poetic justice" (because of the German connection), it was put forward that such settlement could assist Australia's defence plans for the territory, besides injecting "millions" of Jewish pounds into the country. (43) The Jewish propositions came to nothing, but towards the end of 1941 there was another attempt through PIM to stir up interest in "developmental policies" in the Highlands. (44) An article describing a visit to Aiyura by a ministerial party from Australia coincided with Murray's vacation in Australia and with preparations to set up a new capital at Lae which was "a natural outlet for highland products". (45) The outbreak of the Pacific war put a temporary end to any further development proposals.

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39. PIM, August 1935, p. 37.

40. Ibid., September 1938, p. 12.

41. PIM, October 1938, p. 14, referring to Marr's speech on New Guinea Loan Guarantee Bill, 29 June 1938. Australian Parliamentary Debates, Canberra, Vol. 156, pp. 2839-2840.

42. PIM, April 1939, p. 29.

43. PIM, December 1938, p. 6 and February 1939, p. 15. See also statement by Senator McLeay, Minister for External Affairs on 17 November 1938. Australian Parliamentary Debates, op. cit., Vol. 158, pp. 1579-80.

44. PIM, October 1941, p. 37. The party included Mr. A.K. McDonald, Minister for External Territories and Mr. J.R. Halligan, Secretary to the Prime Minister.

45. PIM, October 1941, p. 37. An alternative site for a capital had been suggested before the destruction of Rabaul in 1937. For further information see Willis, Lae, op. cit., pp. 96-101.