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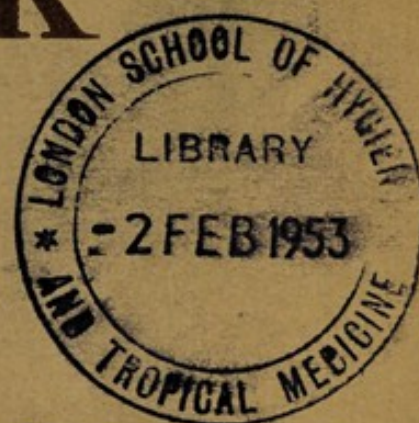
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COLONIAL REPORTS

Sarawak

1951



LONDON: HER MAJESTY'S STATIONERY OFFICE

1953

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COLONIAL OFFICE
REPORT ON
SARAWAK
FOR THE YEAR
1951

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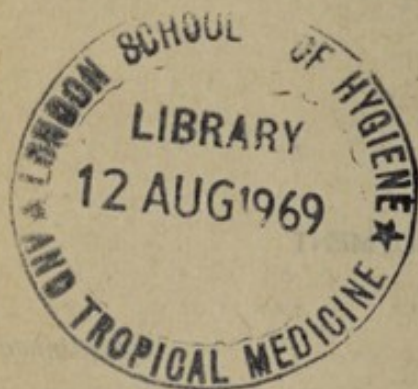
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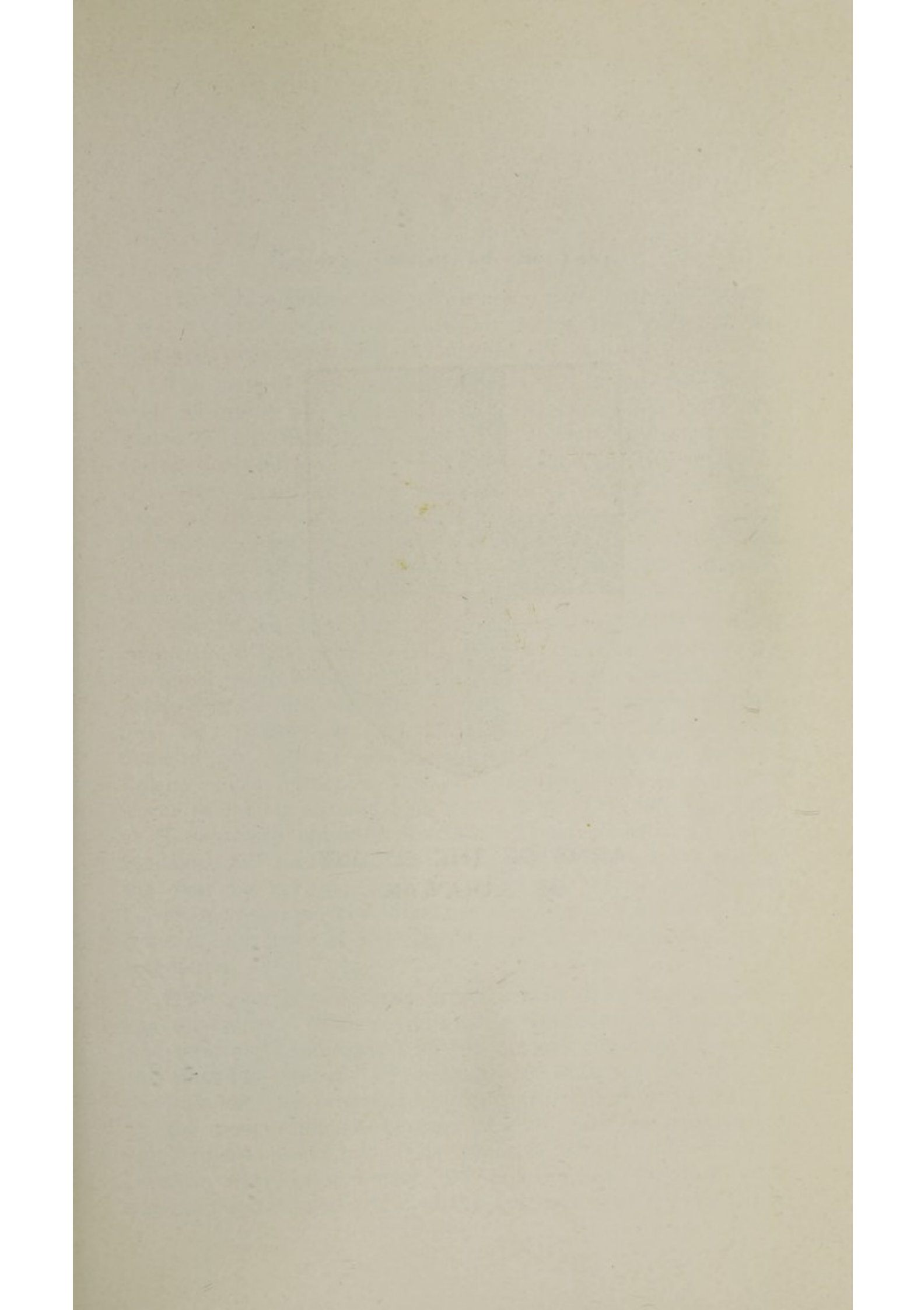
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ARMS OF THE COLONY
OF SARAWAK.

I

General Review of the Year.

His Excellency the Governor, Sir Anthony Abell, K.C.M.G., was on duty in Sarawak during the whole of the year and travelled widely throughout the country.

The general prosperity created by the sudden rise in the value of rubber and other primary products during 1950 continued during 1951. The aggregate value of external trade during the year was \$228 million greater than that of 1950, and there was a favourable trade balance of \$84 million. The most notable features of Sarawak's production figures during the year were perhaps the increase of nearly 25% in the volume of timber and of nearly 300% in the volume of pepper exports. Customs revenue for the year reached a record total.

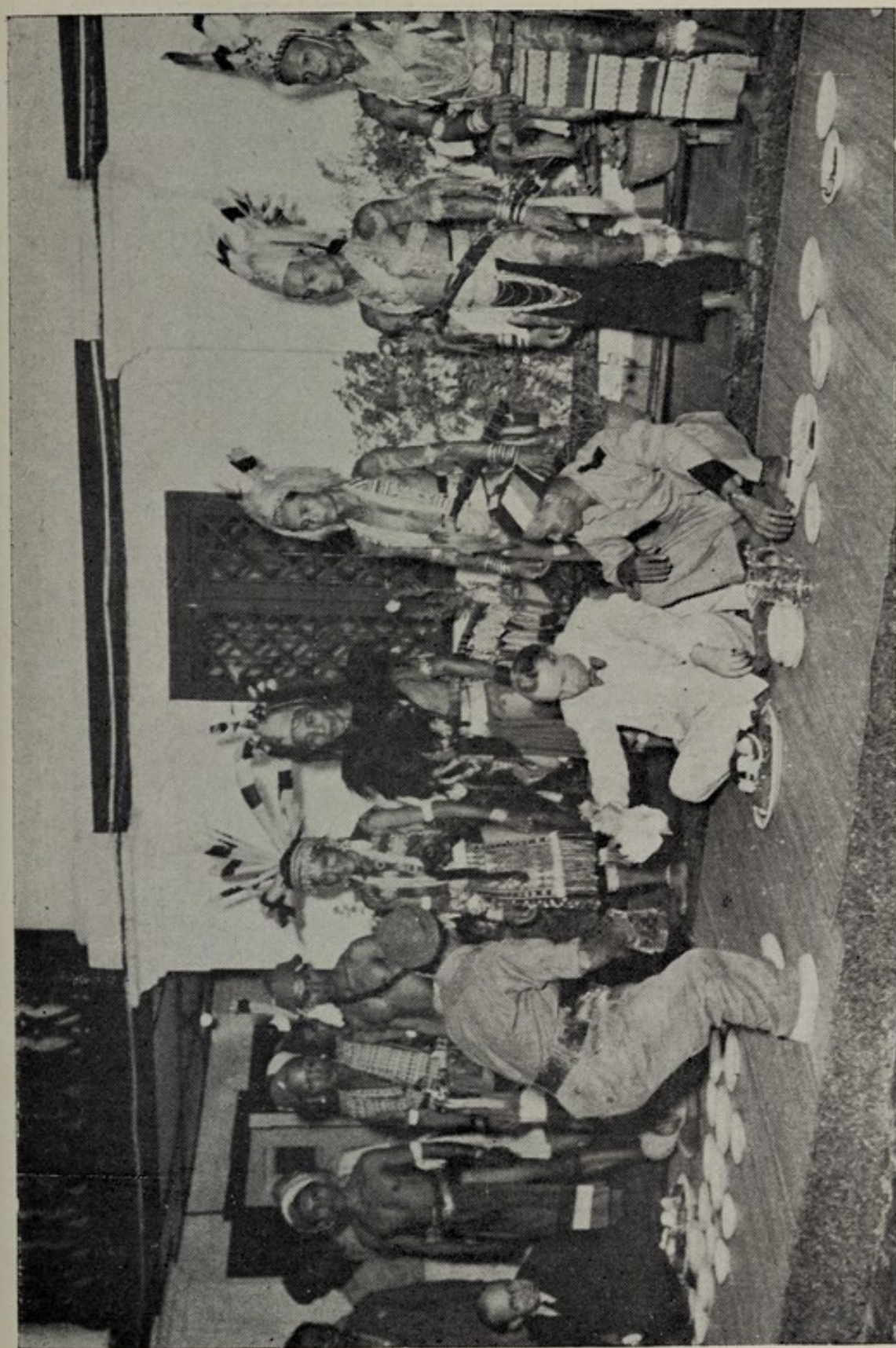
The prosperity of the Colony was reflected in the general prosperity of its people. The greatly increased demand for consumer goods reflected the general increase in wealth of the peasant producers; considerable fortunes were made by middlemen and dealers in export produce. There was a great demand for labour, which was totally inadequate for the Colony's requirements, and the earnings of skilled and unskilled labour remained at levels more than twice as high as those which obtained in 1949. These conditions created hardships for fixed salary earners, but steps were taken during the year by revision of the emoluments of all established Government employees to reduce the disparity between their rewards and those of individuals engaged in production or in commerce.

This general prosperity brought with it its own problems and difficulties. The Government's development programme was seriously handicapped by the extreme shortage of skilled and unskilled labour. Maintenance of ordinary Government services was also prejudiced by difficulties of recruitment and by the resignation of persons able to find more lucrative employment elsewhere. The projects which suffered most severely were undoubtedly the programmes for new construction and rehabilitation of the Colony's road system; it is

not extravagant to assume that the sudden changes in economic conditions during 1950-51 have delayed the completion by a full year. The Colony's development programme was revised during the year to make allowance for increased costs and prices, and for the inclusion of new projects prepared under the Colombo Plan; details of progress during the year and of the revised plan are contained in Chapter IX and Appendix A of the Report. The machinery for controlling development works was strengthened by the constitution during the year of a Development Board representative of the whole territory.

The rise in the value of export crops, the increased demands for labour consequent thereon, and the comparative reduction in the economic attractions of food farming, created problems the real impact of which will not be felt until 1952. It was already becoming apparent at the end of 1951 that local food production during 1952 would be lower than in previous years and that, for this reason, there would be a considerable time lag in the effect upon the cost of living of any reduction in the value of the Colony's primary products.

Despite the difficulties referred to above, some progress was made in the development of Sarawak's public services, which are discussed in greater detail in Chapters VIII and XII of the Report. Particular reference may be made here to the progress in construction of Government house and office accommodation throughout the territory and to preliminary work on the development of waterworks and ports, the effect of which will not be apparent until 1952. Notable progress was also made in the expansion of education and co-operative development, identification of the Colony's mineral resources, and examination and exploitation of the Colony's forest assets. There was, throughout the year, a great increase in the activities of the Colony's Information Services and much preliminary work was done in planning for the development of a Sarawak Broadcasting Service at a later date. There was progress in the medical building programme; but perhaps no branch of the public service was so severely handicapped in its expansion as was the Medical Department, by difficulty in recruiting staff and retaining existing staff. During the year increased attention was paid to social welfare work, and the machinery for examining welfare projects and assessing the claims for assistance of such projects was strengthened by the constitution of a Social Welfare Council and a Social



[G.S.I.S. Photograph.]

His Excellency the Commissioner General, Mr. Malcolm MacDonald, performing a traditional Dayak ceremony of welcome at the Astana, Kuching.



[G.S.I.S. photograph.]

A cheerful boy and girl carry their catch home. Seen in a Malay fishing village near Kuching.

Welfare Advisory Committee. Both bodies did very valuable work during the year; and particular mention must be made of a public appeal launched by the Anti-Tuberculosis Association of Sarawak under the auspices of the Social Welfare Council to raise funds for the provision of a Chest Clinic in Kuching. It was decided during the year to make available to the Social Welfare Council, for expenditure upon welfare projects approved by that Council and by the Government, sums accruing to revenue from the Colony tax on lotteries.

The legislative programme of the year is set out in detail in Chapter X of this Report, and particular reference must be made here to legislation dealing with Local Government. 1951 was a year of notable progress in this field, a year of development not of the racial form of Local Government with which the Colony's programme was begun in 1947, but of authorities embracing within their jurisdiction all races within their geographical area. A great deal of work was also done in preparation for the conversion of the Kuching Municipality into a unit of Local Government with a much greater degree of autonomy than it at present possesses; although it had been hoped to complete this conversion on the 1st January, 1952, staff and other difficulties have made it necessary to postpone the final stage of transition to a later date.

An important feature of the year's legislative programme was the introduction of legislation providing for the constitution of the Unified Borneo Judiciary, which is discussed in greater detail in Chapter XI.

Reference is made above to the revision of salaries undertaken during the year. Particular attention was paid during this revision to the emoluments of the Constabulary; this examination showed that these emoluments were not only inadequate, as were those of many other Departments of Government, in relation to changed economic conditions, but inadequate also in relation to the duties and responsibilities of the various Constabulary grades. The revision finally approved by the Secretary of State therefore embodied relatively greater changes than those approved for other Departments—changes which should go far towards ensuring easier recruitment to and a higher standard of efficiency in a branch of the service the importance of which has been greatly increased by contemporary political circumstances.

Although peace and good order was maintained in Sarawak during the year, and although this happy state of affairs continued in marked contrast to the strife and political unrest in some Far Eastern territories, there was much greater evidence than in any previous year of positive and active Communist attempts to disrupt the peace of the Colony. Reference is made in Chapter VIII, Part A to disturbances in certain schools in Kuching; there can be little doubt that these disturbances were political in origin and also little doubt that a general attempt was being made to use the Chinese school system as an agency for the indoctrination of the younger generation of overseas Chinese in Sarawak with ideals essentially opposed to those upon which the racial amity and co-operation, which has so long existed in Sarawak, is founded.

A political issue, which had been a source of discord within the Malay communities of Sarawak in previous years, disappeared with the end of the Cession controversy, and Mr. Anthony Brooke's formal abandonment of his claims, in February. This decision was welcomed in public statements made by the Governor and the Prime Minister. Much progress was achieved by the Administration during the year in bringing together those sections of the Malay community which had for five years been split by this unhappy controversy.

The creation of a junior administrative service, called the Sarawak Administrative Service, was approved during the year by the Secretary of State. Its object is to enable all races living in Sarawak to participate in the work of government, instead of, as in the past, confining such participation to natives of the country through the medium of the Native Officers' Service. This latter Service is not thereby automatically abolished; it will continue to exist but there will be no fresh recruitment to its ranks.

Sarawak continued throughout the year to assist to the best of its ability the efforts of the Federation of Malaya Government against Communist banditry. No fewer than 484 Dayaks served as Trackers, embodied in the Federation's Civil Liaison Corps in Malaya, and the strength of the Dayak force was maintained at an average of 240.



[G.S.I.S. photograph.]

*Dayak hero Awang anak Rawang who was awarded the George Cross
for meritorious service in Malaya.*



[G.S.I.S. photograph.]

His Excellency the Governor, Sir Anthony Abell with Mr. Gopala Menon, Representative of the Government of India, when the latter presented his credentials at the Astana, Kuching.

In November, 1951, His Majesty approved the award to Iban Tracker Awang anak Rawang, formerly attached to the 1st Worcestershire Regiment, of the George Cross, after a jungle action in which Awang displayed the highest courage and gallantry. This award, reflecting as it did the distinction and honour conferred upon the Iban Tracker Force in particular and the people of Sarawak in general, aroused great general interest and appreciation throughout the Colony.

The work of the War Damage Commission proceeded smoothly and rapidly and it is anticipated that it will be possible to wind up the Commission some time in 1952.

Three members of the Sarawak Legislature—the Council Negri—visited the United Kingdom during the Festival of Britain as guests of His Majesty's Government.

II

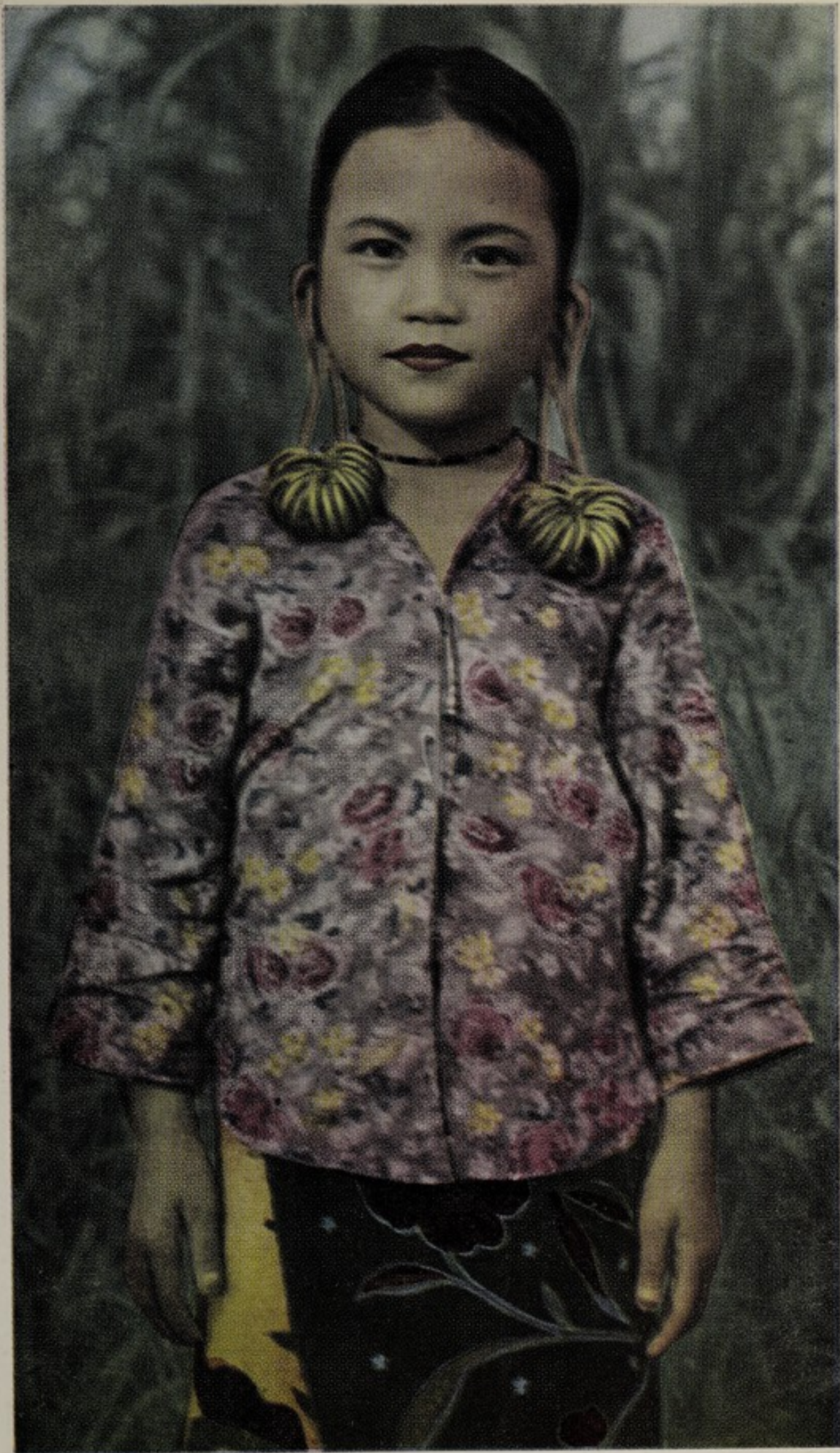
Population.

A full-scale population census was conducted during 1947. The total population of Sarawak in 1947 as disclosed by the census was 546,385.

The main indigenous cultural groups in Sarawak may be classified as Sea Dayak (or Iban), Malay, Melanau, Land Dayak, and a last group of other and indeterminate tribes comprising Kayans, Kenyahs, Bisayahs, Kedayans, Kelabits, Muruts and many others. The non-indigenous races include Europeans, Chinese, Indians and Javanese. In the census, indigenous people were defined as "those persons who recognise no allegiance to any foreign territory, who regard Sarawak as their homeland, who believe themselves to be a part of the territory, and who are now regarded as natives by their fellow men."

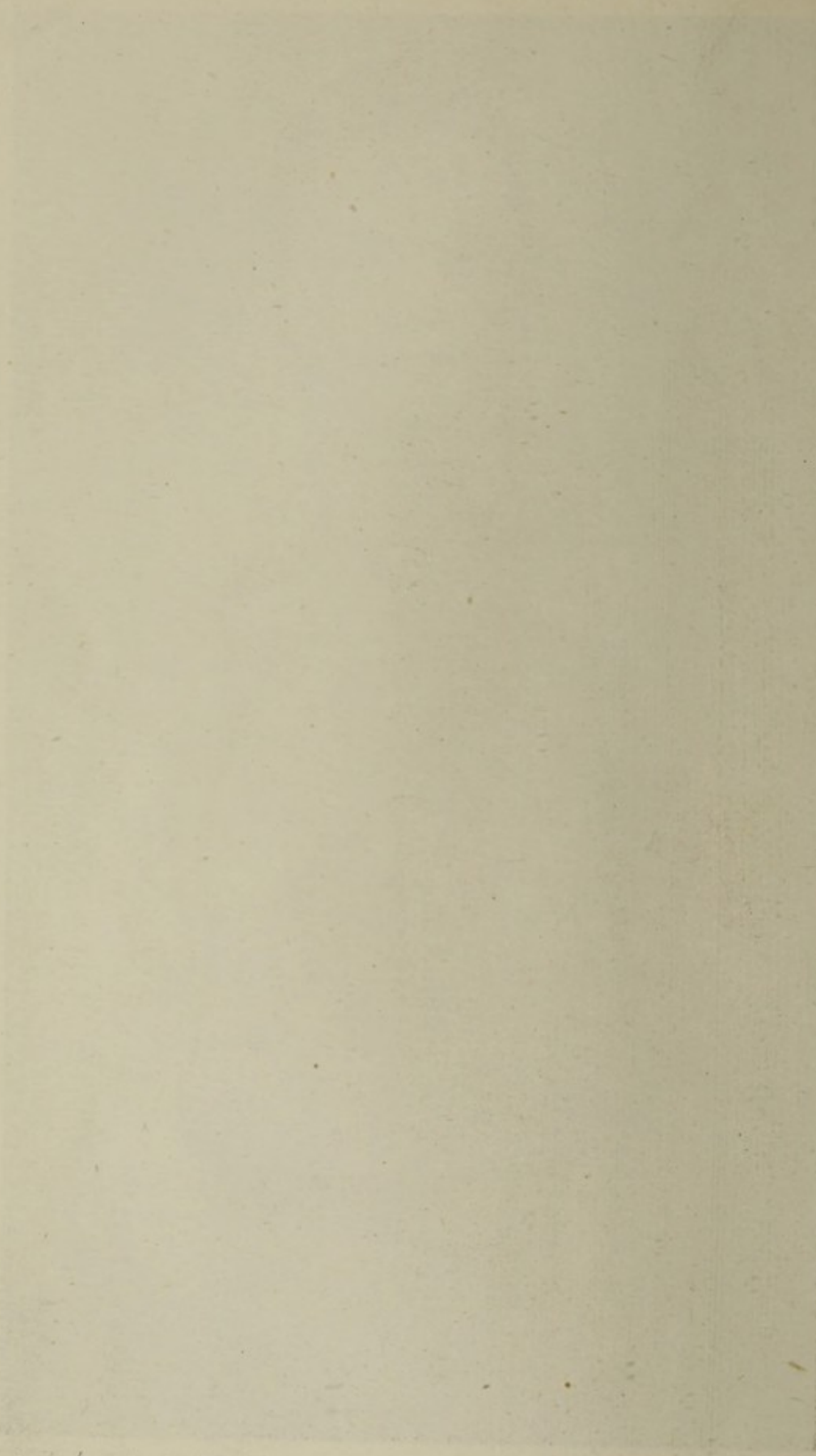
The following table shows the comparative numerical importance of each cultural group as determined by the 1947 census :—

<i>Cultural group.</i>	<i>Population in 1947.</i>	<i>Percentage of total population.</i>
European	... 691	0.1%
Malay	... 97,469	17.9%
Melanau	... 35,560	6.5%
Sea Dayak	... 190,326	34.8%
Land Dayak	... 42,195	7.7%
Other Indigenous	... 29,867	5.5%
Chinese	... 145,158	26.6%
Other Non-Indigenous Asian	... 5,119	0.9%
	<hr/> 546,385 <hr/>	<hr/> 100.0% <hr/>



[Photograph by K. F. Wong.]

Kalabit girl from the Baram River.



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The indigenes of Sarawak form 72.4% of the population. The Sea Dayak group is the largest and probably the most homogenous of the indigenous people. Very strong local variations appear in the Sea Dayak language, yet it is distinctive and well-recognised as a native language of Sarawak.

The Land Dayaks are mainly to be found in the First Division. The legendary home of these people is believed by many of them to be "Gunong Sungkong" in West Borneo, and a close relationship is claimed and exists with people of the same culture in nearby villages in West Borneo. This kinship leads to some movement across the border.

The Malays are of mixed stock and probably are the least native of all the indigenous people. They are bound by the common tie of Mohammedanism and have been powerful along the coast for centuries. Their domination was intermittent and at times must have been almost non-existent, but it was sufficiently effective to leave an impression upon the pagan tribes of the seaboard.

Numerically the Chinese are the second most important group of people in Sarawak; economically they take first place and culturally their influence is second only to European. There is substantial evidence that Chinese have lived in parts of Sarawak for many hundreds of years.

The Melanaus are found in the coastal areas of the Third and Fourth Divisions, and are the principal cultivators of sago. At the present time they are intermediate between the Malays and the Pagan groups, in that some of them retain their Pagan customs and habits, while others have become Mohammedans.

The Kayans and Kenyahs live on the Baram River and the headwaters of the Rejang and the Balui. They are thought to have come from the Batang Kayan across the Indonesian border.

Other indigenous races are the Muruts, Bisayas, Kelabits, nomadic Punans, Kedayans and Dusuns from North Borneo.

IMMIGRATION.

Control was further improved during 1951 as a result of the appointment of two additional Passport Examination

Officers. The issue of immigrant Landing Permits to aliens for permanent stay in Sarawak was reduced to a minimum. Efficient control of all travellers by land between Sarawak and West Borneo, is however still impossible.

There was a marked decrease during 1951 in the small craft trading between Indonesia and Sarawak ports, due mainly to the relaxation of controls on the export of rubber, copra and pepper from Indonesia and also to the drop in the prices of these commodities during the second half of the year. These commodities are now being sent direct from Indonesia to Singapore, where bigger prices can be obtained; smuggling into Sarawak is not as profitable as it was in 1950. Singapore vessels continued to call regularly at Kuching, Sarikei, Binatang, Sibu and Miri. Large vessels call regularly at Tanjong Mani in the Rejang, mainly for loading timber for export. As this place is not an authorised port no passengers are allowed to land in Sarawak from vessels which anchored here. Malayan Airways Ltd., increased their air services to Sarawak and North Borneo this year, the two services a week available during 1951 being increased to one service on Mondays and Fridays and two services on Tuesdays, Wednesdays and Thursdays.

The Secretary for Chinese Affairs, who is also the Officer-in-Charge of Immigration, was appointed Acting Commissioner of National Registration and this department has now taken over the work of initial registration of aliens on arrival in Kuching. This is of great convenience to the public and results in a more economic and efficient administration of the three relevant items of legislation, as well as improved liaison between the Immigration Department and the Constabulary.

It has been agreed in principle that a specified number of skilled technicians and semi-skilled artisans can be recruited by Sarawak Oilfields Limited from Hong Kong, India and Burma for work in their oilfields in Sarawak and Brunei. About forty Indian shop assistants and skilled technicians for logging companies in Sarawak arrived under agreement during 1951. To facilitate travel, especially of Sarawak Oilfields Limited employees, across the border between Sarawak and Brunei, a system of local border passes was adopted during the year.

Migration to and from Sarawak during 1951 was as follows :—

		<i>Arrivals.</i>	<i>Departures.</i>
Chinese	...	4,831	3,725
European	...	1,146	1,086
Malay	...	558	555
Melanau	...	1	31
Sea Dayak	...	487	713
Land Dayak	...	—	28
Other Indigenous	...	20	20
Other Asian	...	417	402
		<hr/>	<hr/>
Total	...	7,460	6,560
		<hr/>	<hr/>

III

Occupation, Wages and Labour Organisation.

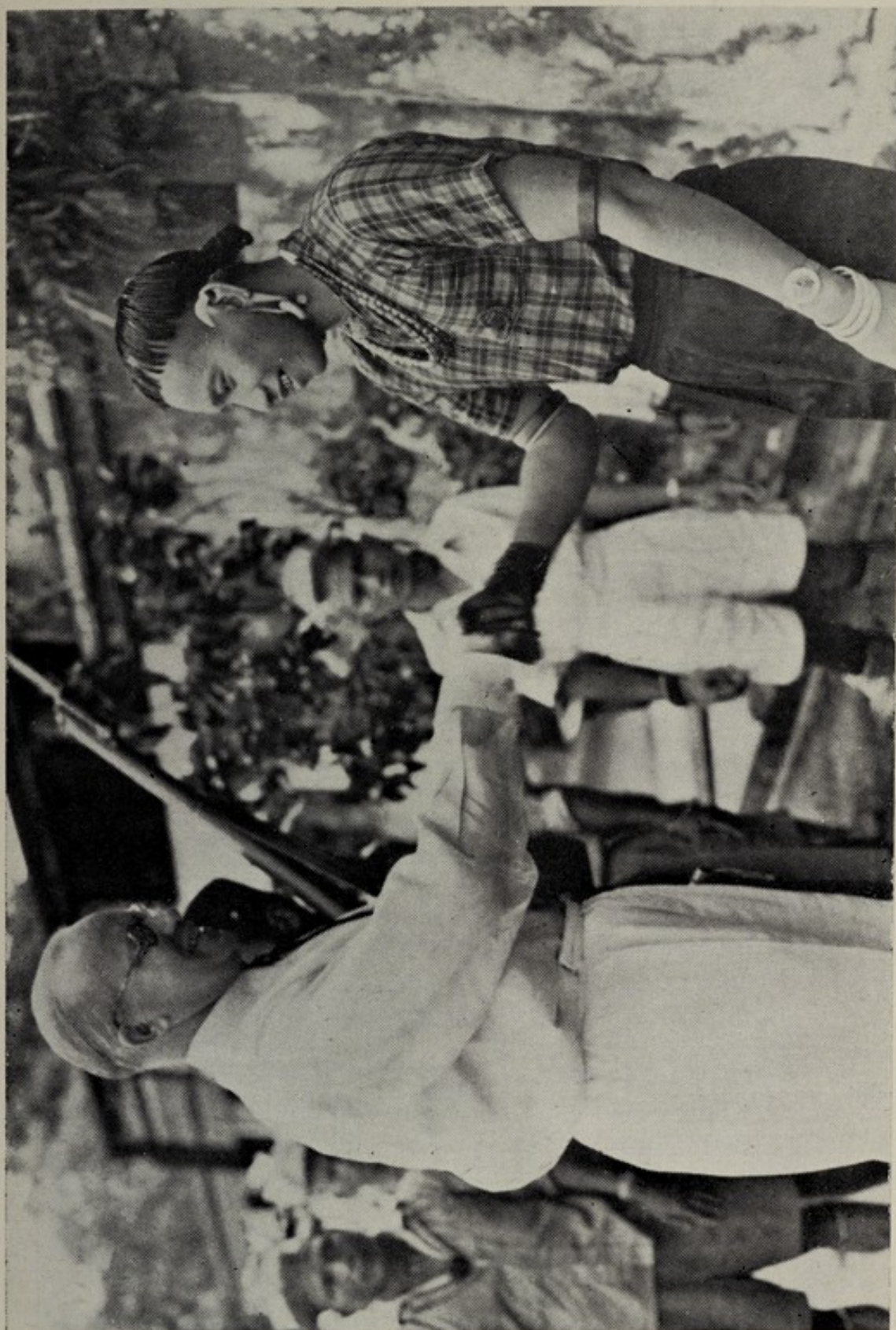
By far the largest part of the population continues to be engaged in agricultural pursuits. The Dayaks, Kayans and Kenyahs are farmers employing primitive methods of agriculture and engaged mainly in planting padi. Approximately 51% of the total population of Sarawak works at some gainful occupation and of this 45% of the workers are employed in some form of agriculture. Many have some other form of part time occupation such as the extraction of jungle produce, a little fishing and spasmodic rubber production. The Melanaus who are a coastal tribe are mainly engaged in working sago and fishing.

Agriculture also ranks first in the occupation of the Chinese; they are to a large extent pepper and rubber planters. There are 48 sawmills now operating and small local factories (mostly Chinese) produce arrack, matches, pottery, bricks, vermicelli and a variety of other products. The retail trade of the country is almost entirely in the hands of the Chinese, as is also a large proportion of the import and export trade, although a number of European firms are active in this field.

The Sarawak Oilfields Ltd., and the British Malayan Petroleum Company, having their Headquarters at Seria, are the largest employers of labour in the Colony of Sarawak and the State of Brunei. During 1951, there were 7,000 men in the labour force, including employees under contractors; the majority of them are Chinese, the balance Malays, Dayaks and Indians. Sago production, logging, dock work and distribution of imported goods make up practically the whole of the rest of the field of organised employment.

A very large proportion of the women of Sarawak do some form of work outside the house, and household duties among the interior people are reduced to elementary cooking and the care of children.

With the general expansion of trade, the year has been a hard one for many industrial concerns owing to the difficulty of obtaining labour. There has been a growing demand for skilled and unskilled labour in the timber and oil industrial



[Straits Times photograph.]

*His Excellency the Governor, Sir Anthony Abell, greeting a visitor from the far interior at the
Astana, Kuching.*



[Straits Times photograph.]

Sea Dayak girls bathing in the Rejang River above Kapit. The girl on the right appears on the current Sarawak fifty cents postage stamp.

undertakings and skilled labourers were brought in from Burma for the former. Proposals to recruit labour from India and Hong Kong for the oilfields have been under consideration. With the exception of a few European owned estates, there are no acute shortages of labour in the rubber industry, since it consists principally of small concerns often based on the family as a unit, where payment is on a profit sharing basis in good times, and where external labour is not employed at all in bad times. Wages of tappers engaged in European owned estates have increased, the reported rate at end of the year (average earning) being \$3.30 per day. Wages in the sago industry increased to \$2.85 a day. Basic rates in the oilfields were increased to \$2.85, \$4.25 and \$5.80 a day for unskilled, semi-skilled and skilled labour. The cost of living has risen greatly throughout the country during 1951.

The Secretary for Chinese Affairs is also the Protector of Labour, and District Officers are Deputy Protectors.

Workers are protected by the Labour Protection Ordinance and the Labour Conventions Ordinance. The former provides protection in matters of health conditions, the truck system, dismissal without notice and agreements to labour, and permits inspection of places of employment. There is machinery for making of complaints by labourers to the Protector, who has power to make orders in respect of conditions of work, wages, notice of termination of work and the definition of a day's work or task. The Ordinance was amended in 1950, to reduce the maximum working day from nine to eight hours and to empower the Protector to call for quarterly returns from employers.

The Labour Convention Ordinance applies to Sarawak a number of International Conventions dealing with labour, industrial undertakings, and child and female labour. There is no regulated system of inspection of places of employment or of reporting on inspections nor will this be possible until staff can be recruited for this function, but District Officers regularly visit all important undertakings in their districts and take such action as appears appropriate. Detailed conditions affecting recruitment of labour for employment outside Sarawak have been drawn up for application by means of a licensing system in conformity with the principles of the relevant International Conventions.

A new Labour Code will be promulgated shortly. The number of registered Trade Unions remained unchanged at 18. They are developing satisfactorily. The Officers of the Unions are in close touch with the Protector of Labour, who often found them willing to accept and act upon his advice.

A Workmen's Compensation Ordinance came into force on 1st April, 1950, and two agreements were made under it.

IV

Public Finance and Taxation.

Revenue and Expenditure.

Comparative figures of Revenue and Expenditure for the year 1950, the original Estimates for 1951 and the revised Estimates based on information available as at 31st March, 1952, are given below :—

	<i>Revenue.</i>	<i>Expen- diture.</i>	<i>Surplus.</i>	<i>Deficit.</i>
	\$	\$	\$	\$
Actual 1950	30,170,616	16,536,527	13,634,089	—
Original Estimates, 1951	20,115,500	19,137,031	978,469	—
Revised Estimates, 1951	45,554,286	21,161,675	24,392,611	—

When the Estimates for 1951 were presented a surplus of \$978,469 was anticipated.

The accounts for the year 1951 have not yet been closed but there is every reason to expect that the actual surplus will be in the region of approximately \$24,390,000.

This figure is based upon the Expenditure for 1951 exceeding the amount originally provided by approximately \$2,024,000 and the Revenue exceeding the original Estimate by approximately \$25,400,000.

It is therefore estimated that at the end of the year 1951 the General Revenue Balance amounted to approximately \$41,900,000.

Revenue.

The main heads of Revenue are as follows :—

Part—I Revenue.

<i>Head of Revenue.</i>	<i>Actual 1950.</i>	<i>Estimated 1951.</i>	<i>Estimated 1951 (Revised March, 1952).</i>
	\$	\$	\$
ORDINARY REVENUE.			
Customs	22,763,988	12,790,000	36,750,265
Licences, Taxes and Internal Revenue	1,610,421	975,100	1,503,951
Fees of Court or Office, etc. ...	1,254,213	320,600	1,335,878
Departmental Services ...	1,078,232	426,700	550,847

Part—I Revenue.

<i>Head of Revenue.</i>	<i>Actual 1950.</i>	<i>Estimated 1951.</i>	<i>Estimated 1951 (Revised March, 1952).</i>
ORDINARY REVENUE.	\$	\$	\$
Reimbursements ...	—	234,000	112,645
Land ...	529,132	422,500	531,636
Forest ...	389,090	416,000	482,070
Posts and Telegraphs ...	506,136	437,000	587,164
Marine ...	153,181	123,500	171,142
Municipal (outstations) ...	284,541	291,500	352,871
Municipal (Kuching) ...	249,871	262,700	290,777
Revenue from Government			
Property ...	104,546	542,900	213,206
Interest ...	918,648	1,135,000	704,813
Income Tax ...	65,769	250,000	229,596
	[29,907,768]	[18,627,500]	[43,816,861]
EXTRAORDINARY REVENUE.			
Land Sales ...	171,368	38,000	287,543
Rehabilitation Loans ...	91,480	100,000	99,882
Transfer of Sarawak Currency			
Fund Surplus (part) ...	—	1,350,000	1,350,000
	[262,848]	[1,488,000]	[1,737,425]
TOTAL ...	30,170,616	20,115,500	45,554,286

Part—II Revenue.**DEVELOPMENT, WELFARE AND
RECONSTRUCTION FUND.**

Grants and Loans under Colonial Development and Welfare Acts ...	—	1,630,228	1,588,889
Contribution from Accumulated Surplus revenue balances for Development Plan Schemes ...	—	5,500,429	5,500,429
Contributions from annual revenue for Development Plan Schemes ...	—	400,000	400,000
Contributions from annual revenue for major capital expenditure ...	—	2,093,023	3,374,135
Contribution from accumulated surplus—revenue balances for major capital expenditure revoted ...	—	362,000	362,000
Loans to be raised ...	—	—	—
By transfer of the Sir C. V. Brooke Education Fund ...	—	428,571	428,571
TOTAL ...	—	10,414,251	11,654,024

Expenditure.

The heads of Expenditure are as follows:—

Part I—Expenditure.

<i>Head of Expenditure.</i>	<i>Actual 1950.</i>	<i>Estimated 1951.</i>	<i>Estimated 1951. (Revised March, 1952).</i>
	\$	\$	\$
Governor	107,277.79	94,701	93,265
Rajah's Dependants	110,621.99	123,800	125,931
Administration, Divisional and District	1,011,444.43	1,649,848	1,702,253
Agriculture	277,533.77	496,997	454,953
Attorney-General	29,432.72	43,417	46,553
Audit	25,492.60	70,050	68,742
Chinese Affairs, Immigration, Labour, etc.	63,955.37	131,874	101,915
Civil Aviation	16,462.13	100,639	62,419
Constabulary	1,106,950.14	1,722,188	1,765,433
Contributions to Development, Welfare and Reconstruction Funds	—	2,493,023	3,774,135
Co-operative Development	40,515.71	82,996	82,905
Defence and Internal Security	140,871.75	150,000	65,823
Education	416,660.41	718,065	556,370
Forests	141,370.66	230,193	238,715
Judicial	86,686.27	131,395	150,669
Kuching Boys' Home	13,661.78	21,053	18,594
Land and Survey	607,403.68	1,006,838	889,914
Local Authorities	230,894.50	296,778	275,281
Marine	660,562.08	533,330	517,424
Medical and Health	1,469,285.52	1,889,539	2,047,259
Miscellaneous Services	2,322,929.52	483,774	1,049,761
Municipal—Kuching	335,812.72	390,296	408,668
Municipal, First Division (Bau)	6,072.72	6,835	10,978
Municipal, Third Division (Sibu, Sarikei and Bintang)	94,627.00	133,237	124,794
Municipal, Fourth Division (Miri)	47,626.23	66,812	62,379
Museum and Library	48,956.75	61,546	58,658
Pensions and Provident Funds	886,308.13	1,025,000	456,737
Posts and Telegraphs	534,280.84	632,022	734,910

Part—I Expenditure.

<i>Head of Expenditure.</i>	<i>Actual 1950.</i>	<i>Estimated 1951.</i>	<i>Estimated 1951 (Revised March, 1952).</i>
	\$	\$	\$
Printing	213,804.73	276,218	206,152
Prisons	173,666.45	238,298	246,892
Public Works Department ...	1,152,484.66	665,144	1,320,546
Public Works Recurrent ...	536,177.90	637,715	711,003
Public Works Non-recurrent	1,933,245.97	1,347,461	836,245
Registration of Births and Deaths	—	—	3,561
Secretariat	170,220.73	287,216	370,772
Survey of Ships	2,306.13	4,894	3,605
Trade and Customs	289,683.66	553,186	587,892
Treasury	92,286.60	266,597	269,665
War Damage Claims Com- mission	50,131.82	74,056	659,904
Clerical Services	754,548.27	—	—
National Registration	147,729.63	—	—
Sociological Research	13,635.60	—	—
Rehabilitation Loans	170,557.00	—	—
Loss on Sales of Investment...	2,350.98	—	—
TOTAL ..	16,536,527.34	19,137,031	21,161,675

Part II—Expenditure.

<i>Head of Expenditure.</i>	<i>Actual 1950.</i>	<i>Estimated 1951.</i>	<i>Estimated 1951 (Revised March, 1952).</i>
	\$	\$	
Class I—Colonial Development and Welfare Schemes ...	2,894,552	1,645,728	1,433,296
Class II—Other Development Plan Schemes	—	780,036	409,192
Class IIA—Development Plan Loan Programme	—	—	238,831
Class III—Other Development and Reconstruction Major Works (3)	1,474,679	2,455,023	1,431,624
TOTAL ...	4,369,231	4,880,787	3,512,943

Public Debt.

The Colony has no public debt.

*Assets and Liabilities.*STATEMENT OF ASSETS AND LIABILITIES AS AT
31st DECEMBER, 1950.*LIABILITIES.**Previous Year.*

\$			\$	\$
	Deposits :—			
	Security Deposits ...		971,158.68	
1,481,696.50	Miscellaneous ...		645,317.38	1,616,476.06
5,461,945.96	Special Funds ...		...	6,210,959.81
298,389.28	Current Accounts ...		...	737,337.04
2,125,714.29	Joint Colonial Fund ...		...	—
—	Trading Account—Food			
	Control ...		...	1,523,940.17
	Allotments :—			
	London ...		2,353.78	
6,407.71	Local ...		5,418.76	7,772.54
32,690.10	Suspense ...		...	—
	General Revenue Balance—			
	Balance as at 1.1.50 ...		9,934,558.67	
	Add Surplus and Deficit			
	A/C. ...		14,135,243.27	
			24,069,801.94	
	Add Appreciation of			
	Investments ...		177,860.30	
9,934,558.67	Balance as at 31.12.1950 ...		...	24,247,662.24
<u>19,341,402.51</u>				<u>34,344,147.86</u>

*ASSETS.**Previous Year.*

\$			\$
2,915,936.02	Cash ...		3,747,847.70
650,128.69	Fixed Deposits with Chartered		
	Bank, Kuching ...		917,509.37
—	Joint Colonial Fund ...		13,002,857.14
12,612,150.77	Investments ...		13,484,397.14
635,630.22	Investments, Special Funds ...		643,439.83
873,730.13	Trading Account—Food		
	Control ...		—
790,843.68	Advances ...		667,887.48
5,616.21	Imprests ...		30.00
584,990.69	Current Account ...		1,011,416.55
18,156.85	Stock—Agriculture ...		—
190,393.30	Drafts and Remittances ...		232,106.52
63,825.95	Remittances between Chests ...		582,939.73
—	Suspense ...		53,716.40
<u>19,341,402.51</u>			<u>34,344,147.86</u>

Note :—

A sum of \$72,794.50 is due by His Majesty's Government in respect of underissues on the following Colonial Development and Welfare Schemes :—

Scheme D.826	...	...	\$ 650.80
Scheme D.973	...	...	64.08
Schemes D.913 & D.913A	...	...	47,763.26
Schemes D.837, R.209 & R.209A	...	...	24,316.36
			<hr/>
			\$72,794.50
			<hr/>

Taxation.

The main source of income during the year 1951 was Custom Import and Export Duties which comprised approximately three-fourths of the total revenue of the Colony. The estimated figure for 1951 was \$36,750,265 including Excise Duties \$841,000.

Customs Tariff.

The Customs Tariff is divided into two parts, namely,

(a) Import Duties which include duties on liquor, tobacco petroleum and petroleum products, sugar, salt, tea, milk, coffee, soap, cosmetics and perfumery, textiles, matches, fireworks, musical instruments, cameras, electrical and wireless apparatus, vehicles, timber and furniture.

(b) Export Duties on birds' nests, copra, damar, fish (dried and salted), guano, jelutong, illipe nuts, pepper, sago and rubber.

The main revenue producing items in 1951 were Import Duties on cigarettes and tobacco \$6,574,166.18, on petroleum products \$582,599.78, on textiles and wearing apparels \$1,244,093.39, on sugar \$526,584.29, and on alcoholic liquors \$1,837,348.06; and Export Duties on rubber \$19,405,195.04, on sago \$836,305.73, on pepper \$2,257,564.82, on copra \$241,331.64 and on jelutong \$284,559.51.

EXCISE AND STAMP DUTIES.*(a) Excise.*

An Excise Ordinance came into force on the 1st January, 1951, and the revenue derived therefrom was approximately \$755,000 from the manufacture of arrack and certain Wines and \$86,000 from the manufacture of matches.

(b) Stamp Duties.

Stamp Duties are imposed on all documents required to be stamped under the provisions of the Stamp Ordinance (Cap. 17). The principal duties are :—

Affidavits or declarations in writing	\$ 2.50
Agreements or contracts ...	.50
Annuity (instrument creating an annuity) ...	10.00
Bill of Exchange (including cheques on bank) :—	
(i) payable on demand or at sight ...	.06
(ii) of any other kind ...	10 cents for every \$100 or part thereof.
Declaration of Trust or Trust Deed	5.00
Receipts ...	6 cents on amounts exceeding \$10.00

A stamp duty of 6 cents on each cheque drawn on a bank, a document previously free of duty, was introduced in 1948.

The structure of the public accounts is such that it is not possible to quote figures of revenue arising from each individual source.

Door and Head Tax.

The system of Malay *hasil* (Head Tax) and Dayak Door Tax current during the rule of the Rajahs of Sarawak has been continued. Such collections, where Local Treasuries have been instituted are, as an administrative measure, paid over to the Local Authorities in full. The "door" tax is equivalent to what is called "hut" tax in other territories, the "door" being the apartment in a Dayak long-house occupied by a single family. These combined taxes yield an annual revenue of approximately \$75,000.

Income and Similar Taxes.

On the 31st December, 1949, the Income Tax Ordinance came into force but at present tax is charged, levied and collected only in respect of the incomes of companies incorporated or registered under any law or charter in force in the Colony or elsewhere. There should be paid for each year of

assessment upon the chargeable income of every company tax at the rate of twenty per centum on every dollar of the chargeable income thereof. The revised estimated revenue for the year 1951 is \$229,000, which represents a very small portion of the collectable revenue.

A Trades Licensing Ordinance was enacted at the November, 1949, meeting of the Council Negri and this came into force on the 1st January, 1950. This Ordinance is a corollary to the Income Tax Ordinance and is designed to extend a simple form of direct taxation, by way of trades licence fee, to certain sections of the community. The fees to be paid by the different categories of businesses are as follows:—

1. A licence to carry on the business of a
wholesale trader—

For the principal or only place of business	... ..	\$ 400
For each subsidiary place of business	...	200

Provided that, if the person who carries on the business deals or trades only in goods manufactured, made or treated by him at the place of such business, the fee shall be—

For the principal or only place of business	... ..	100
For each subsidiary place of business	...	50
2. A licence to carry on the business of a retail
trader including importation from places
beyond the Colony—

For the principal or only place of business or where the business is not carried on at any defined premises	...	150
For each subsidiary place of business	...	50

Provided that no person shall be deemed to be an importer who carries on a business as a handicraftsman and only imports raw materials for the purpose of his trade or business and not for resale of such raw materials.
3. A licence to carry on the business of a retail
trader not including importation from
places beyond the Colony, for each place of
business

...	...	50
-----	-----	----

4.	A licence to carry on the business of a banker (including any branches or agencies)	2,500
5.	(1) A licence to carry on the business of shipping or air transport in the Colony ...	400
	(2) A licence to carry on the business of shipping in respect of vessels engaged only in the carriage coastwise or in the waterways of the Colony of passengers or cargo	50
	(3) A licence to carry on the business of an agent of a shipping or air transport business which has no place of business in the Colony including any sub-agency in the Colony ...	200
	For two or more such agencies ...	400
6.	A licence to carry on the business of a contractor at any place in the Colony ...	400
Provided that where the total number of persons employed on the contract work at any one time does not exceed 20 then only half the above fee shall be charged.		
7.	A licence to carry on the business of letting taxis or passenger or goods service vehicles for hire, or of a passenger omnibus service—	
	If three or more vehicles are used in the business ...	100
	If two or less vehicles are used in the business ...	50
8.	A licence to carry on the business of a remittance shop ...	300
8A.	A licence to carry on the business of a barber or men's hairdresser, in respect of each chair ...	10
Provided that the maximum annual fee for such licence shall be fifty dollars in respect of any one business.		
9.	A licence to carry on any other business ...	50
10.	Duplicate licences ...	2
11.	Any transfer of a licence ...	2

Estate Duties.

The rates of Estate Duties were amended in 1948. Some relief on small estates was granted whilst a heavier duty was imposed on the larger estates.

The revised rates came into force on 1st September, 1948, and are as follows:—

Where the value of the estate exceeds:—

\$ 1,000 but does not exceed \$	3,000	...	1	per cent
3,000	5,000	...	1½	„
5,000	7,000	...	2½	„
7,500	10,000	...	3½	„
10,000	20,000	...	5	„
20,000	40,000	...	7½	„
40,000	70,000	...	10	„
70,000	100,000	...	15	„
Over 100,000		...	20	„

Entertainment Tax.

Entertainment tax is at present charged at the following rates:—

Where the payment including the amount of the duty—		
does not exceed 50 cents	...	10 per cent. of such payment.
exceeds 50 cents	...	20 per cent. of such payment.

V

Currency and Banking.

Currency.

Since the conclusion of the war Malayan currency has been issued in Sarawak, in the first instance to provide a common currency for the three British Borneo territories during the Military Administration. No new issue of Sarawak currency has been made since re-occupation and none is intended. The following currencies are legal tender in Sarawak :—

Malayan

Sarawak

British North Borneo (Chartered Company).

Sarawak currency is gradually being withdrawn from circulation and is being replaced by Malayan currency. So far as is known there is no British North Borneo currency in circulation in Sarawak. The remaining Sarawak currency in circulation is amply covered by gilt-edged securities in the London market.

At the 31st December, 1951, there was \$38,710,956 of Malayan currency in circulation and \$1,598,042 of Sarawak currency, composed of \$961,444 in notes and \$636,598 in coins. There was an increase of \$6,500,000 Malayan currency in circulation during the year. \$199,400 of Sarawak currency notes were withdrawn during the same period.

Banking.

Banking facilities in Sarawak are provided by the Chartered Bank of India, Australia and China, in Kuching, Sibu and Miri and the Overseas Chinese Banking Corporation in Kuching.

In addition there are four small Chinese Trading banks in Sarawak : the Bian Chiang Bank, the Kwong Lee Bank and the Wah Tat Bank.

Post Office Savings Bank.

The number of depositors in the Post Office Savings Bank at the end of 1951 was 4,897 as compared with 3,385 at

the end of 1950. The amount of credit to depositors was \$3,001,548 as against \$1,269,542 in 1950. During the year deposits amounted to \$2,243,055 which exceeded withdrawals by \$1,657,882.

VI

Commerce.

The pattern of commerce in Sarawak in 1951 was not materially different from that in previous years, though an increasing interest in co-operative stores and other co-operative undertakings was apparent. A few companies engaged mainly in production also import and export on their own account; but, generally speaking, the commerce of the Colony is conducted by:—

- (i) The Agency Houses, of which there are few, and
- (ii) The Chinese Wholesale and Retail Merchants, of which there are many.

The Agency Houses. The most important are the leading European companies, but there are also Chinese firms holding valuable agencies. These Houses import either from the United Kingdom, Singapore or other countries, proprietary articles for which they are the sole distributors. They hold a number of such important agencies as buyers for their own account, but in other cases they undertake more the functions of a branch office of their Principals, (the marketing organisations of the great combines). In addition to the sale of goods these firms conduct insurance and other business, and engage in the purchase and export of produce in competition with the Chinese Merchants. They also act as agents and secretaries for the few large Rubber Estates that exist and carry on other activities which come, more properly, under the heading of "Production" e.g., the Timber business.

The Chinese Merchants may be said to engage in the wholesale and retail distribution of goods and the purchase of local produce. Not all firms even trading under Chinese names are composed solely of Chinese members, though this is generally the case; there are however a number of Indian merchants trading almost exclusively in textiles.

Since the trade of Sarawak is very closely linked with that of Singapore, comparatively few consignments of goods arrived direct from the United Kingdom, Australia or other sources, i.e., upon a through bill of lading (and even this would

normally necessitate transshipment in Singapore). Most of the commodities imported are drawn from bulk supplies held by Singapore merchants, or from the large Singapore distribution depots. Similarly most of the general produce of the country finds its way to Singapore for sorting, grading, bulking and re-export. Shipments of sago and rubber to other countries however are frequent, and most of Sarawak's exports of oil and timber are shipped to places further away than Malaya; the United Kingdom having now replaced Australia as the major immediate destination of the latter commodity.

The importation of goods from the United Kingdom and other distant sources is almost entirely in the hands of the few Europeans' firms, but generally speaking the whole trade of the country passes, at some stage or other, through the Chinese Merchants, who carry on what might be described as a "small shop" trade. In the larger towns and bazaars there are, of course, some shops which engage solely in the sale of goods for cash (or more often on credit—the system in almost universal use) but many combines the purchase of rubber and other produce with the sale of sundry goods and Chinese groceries, if so ordinary a term can be given to the great variety of oriental foodstuffs they display; sharks' fins, birdsnests, salted squids, blachan and dried fish vie with the weird and pungent fruits of the East, spices, and all kinds of vegetables, fresh, dried and preserved. Often the small bazaar shop keeps stocks of every commodity its customers could possibly need, a system well suited to the practice of "tying" customers to the shop by extensive credit, and frequently resulting in there being several shops side by side all offering for sale a virtually similar display. Often, too, in the up-country bazaars the Chinese Merchant must provide lodging in his shophouse for his Dayak and other customers: he is their host, their banker, and their universal supplier.

The more important shops in the towns are usually linked with associate firms in Singapore, which keep them supplied with goods and receive their produce. Similarly the firms in Sarawak have their associates in up-river and coastal bazaars. These they supply with goods. In return they receive the rubber, pepper and jungle produce, which has been obtained by sale or barter. Such jungle produce consists chiefly of rattan cane, damar and various types of guttas, of which

jelutong is employed in the manufacture of chewing gum, and such piquant items as dragon's blood and ant-eater skins which are more interesting than important.

Most of this jungle produce comes from remote districts where the needs of the people, for which they cannot and do not provide themselves, are very few; but the up-river Chinese trader knows how to cater for the whims and fancies of the local people, who may set their hearts on any object outside their natural partiality for gold and silver ornaments. The other things they venerate vary with the local tribal custom, and amongst these is a certain type of earthenware jar, large, glazed and urnlike in appearance, and brass gongs. Shotguns and outboard motors are universally esteemed for utility and prestige.

Very little weaving is now done locally, so that imported cloth has become a necessity. Apart from this, in some places far from the towns, very little more than oils and salt for lighting and cooking are really needed by the local people except when the local padi harvest fails, or is short, but it is interesting to note how great is the variety of goods normally to be found even in the remotest bazaar. Such are the ramifications of this "small shop" trade.

Certain Chinese firms carry on an extensive business in the purchase of sago flour for export, and this is in the nature of a specialized trade. Sago exports fell off sharply in 1951. The Department of Trade and Customs grades sago exported and ascertains moisture content.

Pepper production was on the decline before the Japanese invasion, because of the great element of speculation as to the price that the crop, when ultimately produced, would fetch; and during the Japanese occupation it was abandoned altogether; but in the past Chinese merchants have financed the pepper gardeners by a system of "grub-staking", and they are once again doing so. Dayaks in some areas are also beginning to grow pepper. There was a remarkable increase in the amount of pepper exported from the Rejang River area during 1951, due to the vines of new or rehabilitated gardens in the Sarikei area approaching maturity and producing the first real crop since the war. The Department of Trade and Customs recommenced grading and sealing Sarawak pepper during the year, also for the first time since the war.

External Trade.

The aggregate value of external trade for the year 1951 was \$892,094,893 as compared with \$663,917,195 for the year 1950, and \$78,415,599 for the pre-occupation year 1940.

This total is comprised as follows :—

<i>1951.</i>			
Total Exports	...	...	\$508,349,436
Total Imports	...	...	383,745,457
Favourable Trade Balance			<u>\$124,603,979</u>

Trade Balance.

The favourable trade balance figure of \$124,603,979 is misleading since in the total exports of \$508,349,436, exports and re-exports of petroleum account for no less than \$303,186,679.

Crude oil is piped to the refinery in Sarawak from the adjoining territory of Brunei, the value of such imports in 1951 being \$262,813,614. Crude oil from wells in Sarawak (now only a comparatively small quantity) is also treated at the same refinery, and both crude and refined petroleums are included in the total value of exports.

Disregarding the value of imports and exports resulting from the crude oil won in the State of Brunei and in Sarawak itself, the trade balance for 1951 would be \$84,230,914. This compares with \$54,026,410 for 1950, and is made up as follows :—

Total Exports	...	...	\$205,162,757
Total Imports	...	...	120,931,843
			<u>\$ 84,230,914</u>

While the figure of \$124,603,979 can be regarded as an overstatement of the true trade balance, so also may \$84,230,914 be regarded as too modest, in that it does not take into account such production of oil as there was in Sarawak.

Imports.

The declared value of imports for 1951 was \$383,745,457 made up as follows :—

		as compared with		
		1951.	1950.	1940.
		\$	\$	\$
Foodstuffs	... ..	51,513,562	32,372,183	9,770,805
Textiles, wearing apparel, etc.	...	13,933,150	15,077,527	2,796,708
Petroleum, crude and refined	...	267,067,229	202,348,152	8,844,626
Tobacco	... ..	9,654,841	6,534,368	2,556,131
Manufactured goods and sundries	... ..	41,576,675	32,998,474	8,850,609
		<u>\$383,745,457</u>	<u>\$289,330,704</u>	<u>\$32,818,879</u>

Throughout the year the only commodities imported on Government procurement were rice and sugar. Flour, butter, meats, fats and cheese though still on quota were procured through normal commercial channels. Bazaar trade was brisk with supply of consumer goods adequate. The cost of almost all imported commodities rose steadily, and to some extent offset the increase in the purchasing power of the populace brought about by the sustained improved price of rubber, the Colony's main industry. There were substantial increases in the quantities of many classes of goods imported as compared with 1950 which clearly reflected the improved purchasing power of the public in general. Considerable increases in imports of aviation spirit and prawn refuse resulted from more frequent air services and expansion of pepper cultivation respectively.

The cost of all basic foodstuffs in 1951 showed an increase compared with that in 1950. The respective declared values were :—

		1951.	1950.
		\$	\$
Rice	... ..	415.65 per ton	404.29 per ton
Flour	... ..	408.77 „ „	400.46 „ „
Sugar	... ..	671.46 „ „	514.87 „ „
Salt	... ..	73.94 „ „	52.02 „ „
Milk	... ..	1,500.91 „ „	1,295.62 „ „

Compared with 1940 values the 1951 values show an advance of :—

Rice	... ..	4.40 times
Flour	... ..	3.42 „
Sugar	... ..	4.11 „
Salt	... ..	1.49 „
Milk	... ..	2.95 „

Exports.

The f.o.b. value of exports for 1951, \$508,349,436 was composed as under :—

	1951.	as compared with	
		1950.	1940.
	\$	\$	\$
Petroleum, crude and refined	303,186,679	230,308,089	11,446,818
Rubber	158,865,402	113,941,617	26,167,140
Sago Flour	7,988,232	9,277,842	2,184,997
Pepper	17,925,184	4,107,166	362,569
Jelutong	2,310,331	1,795,932	775,209
Various guttas	160,662	265,903	145,930
Damar	613,829	501,366	88,688
Copra	2,654,196	2,651,451	70,629
Timber, sawn and logs	4,727,834	2,839,725	89,840
Sundries	9,917,087	8,897,400	4,438,587
	<u>\$508,349,436</u>	<u>\$374,586,491</u>	<u>\$45,770,407</u>

As compared with 1950, exports of petroleum (crude and refined) rose from 4,055,954 tons to 4,947,598 tons. It is not possible, for the reason explained above under the heading "Trade Balance" to assess the true value these exports have to the country's economy. Crude oil won in Sarawak amounted to 51,708 long tons as against 56,601 long tons in 1950.

Exports of rubber amounting to 42,521 tons in 1951 compared with 55,475 tons in 1950, but as shown above, the value was appreciably higher. Although by far the largest proportion of these exports was shipped with Singapore as the only declared destination, it is of interest to observe that the next principal destination on through bills of lading was the United Kingdom, followed by three European continental countries.

The drop in the tonnage of sago flour exported from 38,243 tons in 1950 to 23,945 tons in 1951 is only partially reflected in the lower value in the latter year. The United Kingdom and India retained their positions as principal destinations on through bills of lading, with Singapore receiving only a comparatively very small quantity.

Exports of timber, sawn and as logs, continued their encouraging trend, being 54,528 tons in 1951 compared with 44,133 tons in 1950 and 36,607 tons in 1949.

Exports of copra of 3,864 tons in 1951 compared with 4,230 tons in 1950, but as shown above the value was slightly higher. Exports of pepper began to show signs of real recovery with 1,209½ tons in 1951 as compared with 282 tons in 1950. Many items exported in 1951 showed substantially decreased tonnage compared with 1950, though these were of relatively minor importance.

As also in previous years, Tanjong Mani at the mouth of the Rejang River continued to increase in importance as a shipping centre. In 1950 26 vessels of 80,701 nett tons called: in 1951 33 vessels used the anchorage, chiefly for loading timber. Customs facilities with a godown and jetty are to be provided at this new port. The nett registered tonnage of foreign shipping using various Sarawak ports in 1951 was—

Kuching	...	238 vessels	77,211 tons
Sibu	...	84 „	32,191 „
Miri	..	880 „	2,169,945 „
(of which 496 were tankers)			
Tanjong Mani...		33 vessels	91,465 „

A particular point of interest in 1951 was the remarkable increase in the use of the parcel post. Mainly owing to the very high handling charges in Singapore for goods sent by ship, many merchants—particularly textile dealers—have begun importing by the parcel post. At least twice as many parcels were received in the Colony from outside in 1951 as in the previous year.

Customs Revenue.

The total Customs revenue for 1951 amounted to \$35,467,560 composed as follows:—

				as compared with	
				1950.	1940.
Import Duty	...	...	\$12,338,783	\$ 8,869,679	\$2,252,028
Export Duty	...	...	23,128,777	14,765,843	1,278,254
<u>\$35,467,560</u>				<u>\$23,635,522</u>	<u>\$3,530,282</u>

This remarkable rise in revenue resulted mainly from the sustained higher prices of the Colony's principal exports—in particular rubber, with concomitant increase of imports due to higher purchasing ability.

In the early part of 1950 the Department of Trade and Customs undertook the sealing in small standard packages of Siam tobacco imported in bulk. It is interesting to note that the revenue from import duty on this tobacco was—

for	1949.	1950.	1951.
	\$245,896	\$525,810	\$565,825

Lack of experienced and educated outdoor staff, largely a continuing result of the Japanese occupation, proved a handicap to the Department of Trade and Customs throughout the year, though there was some small improvement. The increased use of Tanjong Mani as a port has meant added calls on departmental services. Lack of adequate godown accommodation, however, remained by far the greatest obstacle faced by the Department, and in Kuching the delayed arrival of steel for a new Import Godown is lamentable. The fact that only very few commodities imported are individually crated necessitates detailed examination of almost every single package on arrival, involving provision of much floor space; and in Sibu particularly—as well as in Kuching—the present situation in this respect is not satisfactory. It is apparent also that wharf facilities will soon have to be considerably extended.

Tariffs.

The only alteration to the Customs Tariffs during the year was made in September when the following articles were added to the Import tariff:

Rifles and Guns	... per barrel	\$5.00
Pistols and Revolvers	... each	3.00
Cartridges (loaded or empty)	... per 100	1.00

Excise.

An Excise Ordinance, enacted in 1950, came into force on 1st January, 1951. One factory previously operating under the Monopolies Ordinance, immediately came under the new Ordinance in so far as its production of liquor was concerned. A new distillery for the manufacture of liquor was also established near Kuching and commenced operations early in the year. Later, a further distillery was completed at Sibu, and is almost certainly one of the largest in this part of the world.

Simultaneously with the coming into force of the Excise Ordinance the old system of "arrack farm" operating under the Monopolies Ordinance was abolished. Besides establishing a better standard quality of locally-distilled liquor, revenue from this source was also materially increased. Excise Duty collected in 1951 from the three licensed distilleries amounted to \$755,918 whereas in the previous year only \$421,576 was derived from rents and fees paid by the old arrack farms, and from duty paid by one distillery.

Revenue continued to be collected on excise lines also from the Sarawak Match Factory, still operating under the Monopolies Ordinance. \$86,040 was obtained in 1951 from this source, compared with \$90,900 in 1950.

COMPARATIVE STATEMENT OF TOTAL IMPORTS AND EXPORTS.

	1951.	1950.	1940.
Total Exports	\$508,349,436	\$374,586,491	\$45,770,407
Total Imports	383,745,457	289,330,704	32,645,192
	<u>\$892,094,893</u>	<u>\$663,917,195</u>	<u>\$78,415,599</u>

DETAILS OF PRINCIPAL IMPORTS.

	1951.		1950.	
	Quantity.	Value.	Quantity.	Value.
Beans and Peas ...	... Tons	\$ 669,846	1,053	\$ 491,794
Biscuits ...	... "	1,322 1,624,349	1,492	1,432,784
Boots and Shoes ...	... Doz. pairs	33,313 947,068	31,635	635,166
Butter and Cheese ...	... Tons	55 185,192	57	172,322
Cloth—Cotton, Silk and Woollen ...	... Sq. yards	8,718,730 7,860,532	13,397,860	8,843,229
Clothing—Cotton, Silk and Woollen ...	... Dozens	79,431 1,118,946	111,416	1,212,294
Coffee—Raw and Ground ...	... Tons	343 821,358	478	836,809
Crockery and Glassware ...	...	785,678		794,032
Cycles, Motor Cycles and Accessories ...	...		
Chemicals and Drugs ...	...	1,441,087		754,971
Electrical Goods and Apparatus ...	...	2,830,374		2,523,941
Fish, Dried, Salted and in Tins ...	... Tons	1,153,790		1,009,213
Flour, Wheat ...	... Tons	2,951 3,824,738	2,800	3,132,719
Fruits, Fresh, Dried and Preserved ...	... "	2,477 1,012,545	3,279	1,313,123
Iron, Steel, etc., and Manufactures thereof ...	... "	1,004 1,067,569	792	771,962
Machinery ...	...	3,753,248		3,208,646
Milk, Condensed, Sterilized, etc. ...	...	6,265,387		3,854,690
Motor Lorries, Cars and Accessories ...	... "	1,990 2,986,827	1,733	2,245,308
Oil—Lubricating, Kerosene, Benzine, Crude and Liquid Fuel ...	... "	1,399,799		756,364
Petroleum Gas—Natural ...	... Cu. feet	4,915,667 266,631,003	4,072,802	201,892,454
Rice ...	... Tons	1,744,904,000 436,226	1,822,776,000	455,698
Salt ...	... "	31,413 13,056,856	19,331	7,815,269
Soap ...	... "	3,492 258,193	3,357	174,647
	...	1,040,603		522,162

DETAILS OF PRINCIPAL IMPORTS.—(Contd.)

Stationery and Books	...	702,834		710,074
Sugar	...	10,578	6,528	3,361,059
Tea	...	98	103	376,880
Twine and Threads	...			1,215,667
Tobacco, in tins, Cigars and Cigarettes	...	1,254,157	1,022,015	6,273,458
Vegetables, Fresh Salted and Preserved	...	1,700	1,189	941,791
Wines and Spirits	...	588,352	249,433	1,611,245

DETAILS OF PRINCIPAL EXPORTS.

		1951.		1950.	
		Quantity.	Value.	Quantity.	Value.
Betelnuts (Arecanuts)	.. Tons	16	\$ 2,736	16	\$ 2,303
Beeswax	.. "	1	1,730	1	1,665
Birdsnests, Edible	.. "	9½	54,397	10½	51,258
Canes	.. "		44,171		72,915
Copra	.. "	3,864	2,654,196	4,230	2,651,451
Damar	.. "	964	613,809	1,508	501,366
Fish—Fresh, Dried and Salted	.. "	75½	92,496	100	153,195
Gutta—Jangkar	.. "	43	79,414	47	51,260
Jelutong, Raw	.. "	110	117,210	253	158,033
Jelutong, Refined	.. "	487	1,275,327	456	833,663
Jelutong, Pressed	.. "	498	917,794	835	804,236
Percha	.. "	9	67,849	43	214,643
Nipah Sugar	.. "	139	58,387	398	118,905
Oil—Vegetable	.. "	27	32,124	1	1,213
Crude Petroleum	.. "	3,206,152	200,414,197	2,356,997	136,855,336
Refined Petroleum	.. "	1,741,446	102,772,482	1,698,957	93,452,753
Pepper	.. "	1,209½	17,925,184	282	4,107,166
Prawns, Dried	.. "	54	165,483	86	224,211
Rattans	.. "	1,006	344,584	1,046	207,599
Rubber, Plantation	.. "	42,521	158,865,402	55,475	113,941,617
Sago Flour	.. "	23,945	7,988,232	38,243	9,277,842
Timber	.. "	54,528	4,727,834	44,133	2,839,725
Cutch	.. Cwts.	15,600	501,820	35,369	1,153,354

VII

Production.

A. AGRICULTURE.

The country has an area of about 47,000 square miles of which it is estimated about 13,000 square miles are used for agricultural purposes. The 1947 census showed a population of about 546,400 persons; the overall population density is therefore low, averaging only 11.4 persons per square mile. It has been estimated that on the basis of existing methods of subsistence farming—which is the only sound method on which to assess short-term potentialities for agricultural development—the country could not safely support a rural population of more than 2½ million people.

Preliminary surveys show that approximately 5,600 square miles of the flat deltaic and coastal regions consist of deep peat swamp, at or near sea level, which is in its present condition, unsuitable for agriculture. It is probable that reclamation, by normal methods of empoldering, of most of this deep peat swamp land for wet padi cultivation would be impracticable and uneconomic. There are, however, considerable areas of moderately good wet padi land, estimated at a total of not more than 2,000 square miles, situated mainly on the river-banks in the deltaic areas.

The remainder of the country, that is the hinterland and interior, consists largely of steep hills and mountains. Occasional flat areas occur in the valleys between the hills, but such areas form only a very small proportion of the whole. The soils of the hinterland and interior are generally extremely thin and poor by ordinary standards, and their poverty has frequently been accentuated by severe erosion and leaching. There are limited outcrops of basic and intermediate igneous rocks, and of limestones; where these do occur there is a local marked improvement fertility of the alluvial soils in that area.

Favourable climatic conditions do to some extent counteract the general poverty of the soils, and wherever there is even a moderate depth of reasonably friable soil vegetative

growth is often surprisingly vigorous. The average annual rainfall is of the order of 160 inches. In the southwestern part of the country there is a definite period of maximum rainfall during the months of December, January and February. In the northeastern part of the country the maxima and minima are not so pronounced, and the distribution of rainfall is more uniform. Shade temperature averages 80°F and there is little variation from this average, minima below 70°F or maxima above 90°F not often being recorded. Atmospheric humidity is generally high; though sometimes, particularly during a dry spell, there is a marked drop in relative humidity in the forenoon. Sunshine records have only recently been started, but it would appear that the general average for the country will only be about five hours bright sunshine per day.

Pest damage on crops can be extremely serious at times; observations suggest insect pests may be more serious than fungoid pests, though it is possible that as more intensive cultivation is practised fungoid pests may become a greater menace. Small animals particularly rats and squirrels, are a major pest; and wild pigs, monkeys and deer can also do considerable damage. Giant snails are also becoming a pest of increasing importance.

Apart from five large rubber estates, small farms are responsible for most of the agriculture of the country. The policy is to encourage the native farmer to develop the country's agriculture by working a mixed system of farming, rather than development by the large specialised plantation. It is now generally agreed that some control over the farmer will be necessary, if progress is to be made in accordance with this policy, and that this control can best be exercised through the establishment of "group farming" units. The prospects for development of co-operative societies for the country's rural industries are promising.

The developmental work of the Department of Agriculture has been seriously hindered since the war by the acute shortage of trained and experienced staff. Difficulties consequent on this shortage have been aggravated by the primitive state of the country's communications. The position is still difficult but has eased somewhat since the establishment in 1951 with financial assistance from the Colonial Development and

Welfare Fund of a permanent Department of Agriculture Staff Training School near Kuching.

Much of the Department's efforts since the Liberation have been concentrated on preliminary surveys and investigation work necessitated by the dearth of previously recorded technical information about agricultural conditions.

Some development schemes have now been started and, considering the difficulties that have to be contended with, good progress is being made. Most of the schemes have been dependent to a considerable extent on financial assistance from the Colonial Development and Welfare Fund and indeed without this assistance the schemes could not have been started. The main schemes are group wet-padi-farming projects at Payas Megok and Paloh in First Division, at Bijat in Second Division, and Rantau Panjang in Third Division, at Limbang in Fifth Division and more recently at Sibuti in Fourth Division. A main agricultural station is now in full operation at Tarat in First Division and other small stations are being established in other parts of the country. By the end of 1951 all these development centres throughout the country had become striking demonstrations of what can be achieved in Sarawak by stabilised intensive methods of farming as opposed to the shifting land robbing that is all too common at present; the results of this work leave little doubt that Sarawak could safely support a very much higher population than the $2\frac{1}{2}$ million people suggested earlier in this section provided the methods advocated by the Department of Agriculture were widely adopted.

The position with regard to particular crops is briefly as follows :—

(1) *Padi*. This is the main crop. There is no doubt technically that Sarawak could be self-supporting in rice, its staple foodstuff. In fact, when prices for the main export products are low and there is little money available in the rural areas for purchase of imported rice, the country does of necessity approach self-sufficiency in this commodity. When however, prices of export products are high (as in 1950 and 1951 when rubber and pepper fetched record prices) interest in padi planting wanes, and Sarawak may become dependent on imports for as much as half its rice requirements.

Imports have continued since the war and have been as follows :—

1947	...	19,272	metric tons.
1948	...	17,525	„ „
1949	...	11,517	„ „
1950	...	25,478	„ „
1951	...	31,907	„ „

The Government has had a padi purchasing scheme in operation since late 1946 and has guaranteed a minimum buying price for locally grown padi. For a time the scheme undoubtedly encouraged padi production but during the rubber and pepper boom most of the ground gained has unfortunately been lost. Now that there has been a fall in the price of rubber and pepper it is expected that greater interest will be taken by the farmers in the scheme.

A destructive method of shifting hill or dry padi cultivation, which is bringing very serious problems in its train, accounts for a considerable part of the padi produced; powers to control and rationalise this practice are now available under the Natural Resources Ordinance.

Swamp or wet padi is cultivated, mainly in the deltaic and coastal areas. The methods employed are generally primitive and yields are often low. There is great scope for intensification of cultivation on the wet padi land, particularly as far as improved water control is concerned. Even in the wet season, short dry periods which can have a disastrous effect on the padi, are liable to occur, and provision of some irrigation water is generally necessary. The terrain makes construction of gravity fed canals generally difficult or impracticable, but considerable success is being obtained with small, diesel driven, pumping plants raising water from the rivers which usually flow adjacent to the padi land.

The 1950-51 crop was fair. Forecasts for the 1951-52 are generally excellent but unfortunately the acreage is well below average as farmers have given so much attention to the more profitable rubber and pepper crops.

(2) *Rubber.* Rubber is the chief tree crop and Sarawak's most important agricultural export. It was estimated in 1941 that there were approximately 240,000 acres under rubber, of which 10,580 acres were on five large estates, the remainder being accounted for by small holdings each less than 5 acres in size. It is possible that the acreage increased during the

war. Most of the acreage is occupied by old seedling rubber in very poor condition and must be regarded as a wasting asset. Technique of management, tapping and sheet manufacture is generally of a very low standard. Rubber prices which, in 1950 reached a phenomenal level, remained high during 1951 and the industry was extremely prosperous. There is now considerable interest in planting and replanting of rubber with high yielding material and suitable budwood and clonal seed are being supplied by the Department of Agriculture. In order to guard against planting on land needed for wet padi and suitable for that purpose, it has again become necessary to control planting by reimposition of certain sections of the Rubber Regulation Ordinance which had been suspended in 1946. A small modern factory for processing latex collected from surrounding smallholders has recently been erected near Kuching and is operating successfully; the success of this pilot scheme suggests that such small centralised factories may well be the answer to the problem of improving the quality of rubber exported from Sarawak.

(3) *Sago*. It is estimated that there are about 150,000 acres under sago cultivation, the major part lying in the Mukah, Oya and Dalat regions of the Third Division and being worked principally by Melanaus. No detailed information as to the number of palms and their age and condition is at present available but, taking account of land under fallow and of land occupied by young, immature palms, it is estimated that about 75,000 acres can at present be regarded as under productive sago. For a time after the Liberation, production of sago flour was at a high level and there is no doubt that the plantations were in consequence overworked; the average quality of the product was very poor. Production is now more in accord with rates of regeneration and replanting. Since the passing of the Sago Flour (Control of Exports) Ordinance, 1948, export of sago flour that does not reach a specified minimum standard of quality has been prohibited; the more progressive sections of the trade have on the whole co-operated well and there has been some improvement in the general quality of the sago flour exports. Investigations which are being made into the technical properties of sago flour suggest that its potentialities as a source of industrial starch may not yet be fully appreciated and the matter is being pursued as far as available facilities allow.



[Photographed by I. A. N. Urquhart.]

Agricultural Development. Sorghum. Simanggang, Second Division. Crops such as this produced on land formerly covered by fern and other Native vegetation are producing over 1600 lbs of seed and 7000 lbs of leafage and straw all of which is a palatable and valuable stock feed.



[Photographed by M. McSparran.]

Agricultural Development, 2nd Division. Selection and production of high quality strain seed is one of the many works being carried out on the Bijat padi scheme. Irrigation in this area also produces good results.

(4) *Pepper*. This was an important export product before the war; quality was generally good and the best grades commanded the highest prices offered in the world markets. Unfortunately most of the gardens were abandoned during the Japanese occupation but considerable replanting has taken place recently and there is little doubt that the number of tended vines is now at least equal to the pre-war total and is still increasing rapidly owing to the excellent prices ruling. The vines are planted in small gardens, frequently less than half an acre in extent; unfortunately most of the pepper is still cultivated under a pernicious system of shifting cultivation but it is hoped that it will be possible to minimise the worst effects with powers available under the Natural Resources Ordinance, 1950. Exports of all types of pepper totalled 20,160 piculs in 1951; quality was not up to pre-war standard but is improving. Exports in 1952 may reach a total of 40,000 piculs.

(5) *Coconuts*. This is mainly a smallholder's crop, largely confined to the First Division. The total acreage occupied by the crop is estimated at 21,000 acres, though many of the palms are known to be old and in very poor condition. Some copra is exported.

(6) *Tuba Root*. (Derris) has been cultivated in the past, but production and export are now small. Planting is being encouraged as there is a good export demand.

(7) *Gambier* was an important product many years ago, but production is now negligible.

(8) *Pineapples* of high quality and exceptional flavour are produced in small quantities on drained peat soils.

(9) *Tobacco*. Small areas are planted by the local inhabitants for their own use. The quality of the product can probably be improved.

(10) *Coffee* is cultivated to a small extent in plots adjacent to the villages.

(11) *Cocoa* is not yet cultivated by farmers in Sarawak but some observation plots recently established by the Department of Agriculture show promise, particularly on the better types of land. About five hundred seedlings raised in quarantine in Malaya from clean selected seed obtained from the Gold Coast and recently imported into Sarawak by the Department of Agriculture are making satisfactory progress and

beginning to come into bearing; the trees are being used as the basis of a seed production station.

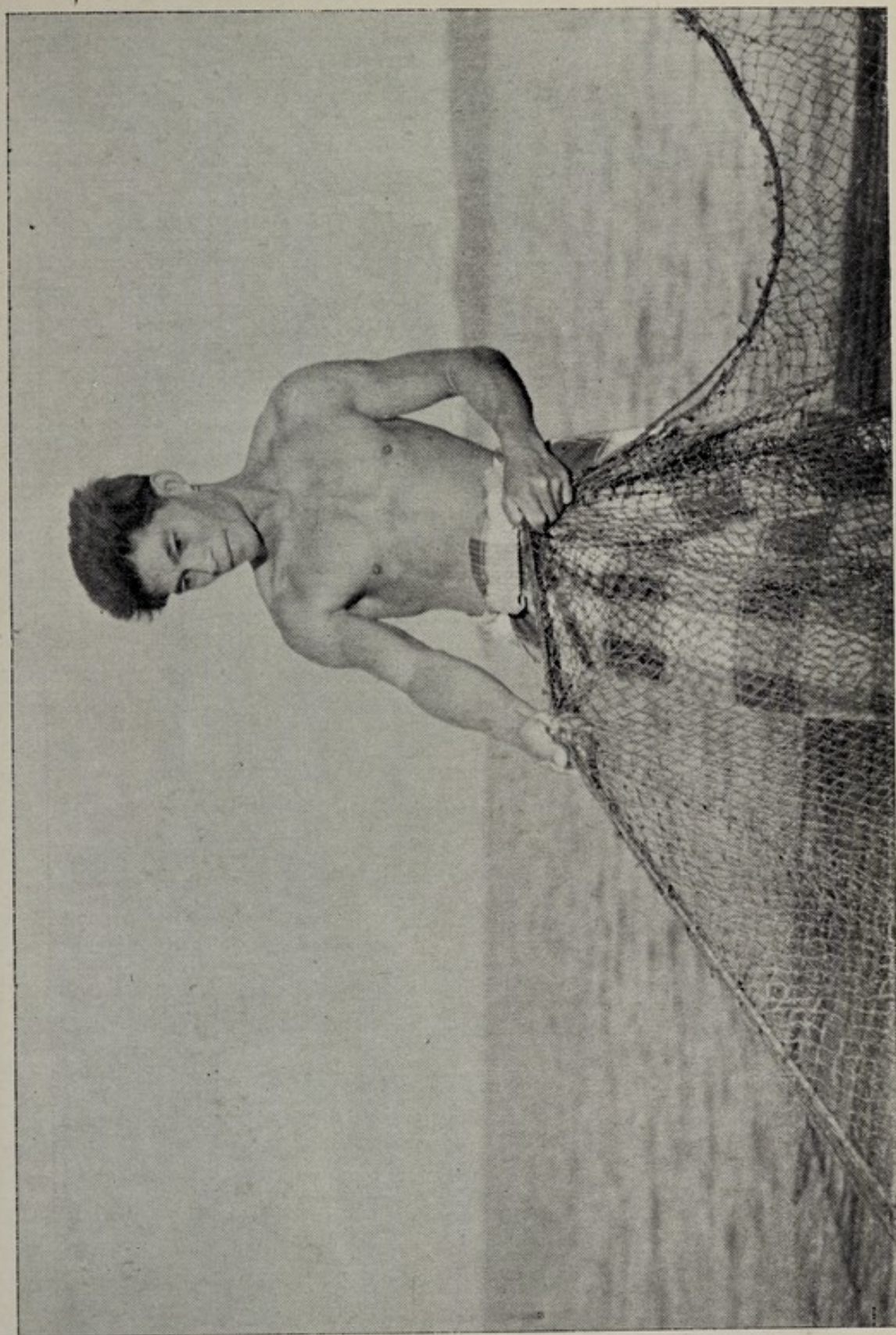
(12) *Fresh Fruit and Vegetables* are produced near the towns for local consumption. Vegetable production is generally in the hands of Chinese gardeners.

(B) ANIMAL HUSBANDRY.

Livestock husbandry at present plays but a small part in Sarawak's rural economy. Bullocks are rarely seen. There are in the Fifth Division herds of buffaloes, estimated to total of 5,600 head, used for meat and for cultivating the swamp padi fields, but elsewhere the number of buffaloes is negligible. Small herds of cows are kept, mainly by Indians near the towns. In order to meet the need for increasing stocks, control is now exercised over the slaughter of cows and female buffaloes suitable for breeding. Pigs are kept by Chinese smallholders and are also generally found in and around Dayak villages. There is scope for the development of pork production provided the supply of feeding stuffs can be improved, and this matter is being given increased attention; some pure bred Middle Whites have been introduced by the Department of Agriculture and are proving very suitable for crossing with local pigs. Ducks are easy to keep and fit in well with local farming systems; farmers are being encouraged to keep more ducks. Some domestic fowl are found in the villages, but they do not do well in Sarawak except in the hands of the really skilled and experienced poultry keeper; however some success is being obtained with flocks made up with Rhode Island Red day-old chicks imported from Australia by air. The Malays keep a few goats. Disease is probably an important factor limiting development of livestock husbandry in Sarawak and full scientific investigation of the matter will eventually be necessary; considerable success has already been obtained by inoculating poultry against Ranikhet disease.

(C) FISHERIES.

Fish forms a staple food for many of the country's inhabitants, and both marine and freshwater fisheries are of considerable importance. Marine fishing is the main source of supply, most of the catch being obtained from the shallow,



[G.S.I.S. photograph.]

A Malay fisherman at work.



[G.S.I.S. photograph.]

A typical Malay house in a fishing village near Kuching.

coastal waters by Malay, Melanau, and Chinese (Henghua) fishermen. A surplus of certain varieties occurs and in 1951 exports of fresh fish totalled 419 piculs valued at \$16,500. Production of other types which are widely consumed is insufficient to meet local needs and imports of dried, salted and canned fish in 1951 totalled 2,026,021 piculs valued at \$3,813,085.

The fishing methods used along the coasts may appear crude to the casual observer, but anyone acquainted with sea fishing is soon impressed by the simplicity, ingenuity, and suitability for local conditions of the fish catching contrivances employed. The fishermen display considerable skill and a high standard of seamanship. A survey of local sea fisheries has recently been completed, and the results confirm that there are not the concentrations of fish in Sarawak waters to justify large scale fishing. Nor have indications yet been obtained of any large fish concentrations worth serious attention in the deeper waters further off shore. Experiments with modern temperate water methods have also suggested that these were unlikely to be successful in the local waters. However there seems to be scope for some mechanisation of existing local methods, and this on even a limited scale might lead to self-sufficiency in home markets and increased exports of certain varieties.

Improvements in the transport and marketing systems are possible and it is hoped to devote more attention in future to these aspects of the industry perhaps as subjects for co-operative development.

Conditions are generally suitable for freshwater fish farming and some Chinese farmers successfully obtain large yields of fish, but unfortunately some of the most important species do not breed in Sarawak and fry have to be imported from China. Recent investigations suggest however that the rate of breeding, and of growth of small edible indigenous fish in the smaller streams, can be increased by methods that are cheaper and simpler than those applied in the elaborate fish ponds used by Chinese farmers. Feeding at selected points seems to increase breeding and help growth considerably, although it does not appear to be essential to the existence of the fish.

(D) FORESTRY.

The Forest Department staff now consists of 117 officers of all ranks, including 5 members of the Colonial Forest Service. The administration is organised on a Divisional basis, with an Assistant Conservator, who is directly responsible to the Conservator, in charge of each Division. One Assistant Conservator is seconded to Brunei as State Forest Officer.

Practically the whole natural vegetation of Sarawak can be included in the term Low Land Tropical Rain Forest if areas of scrub forest subject to shifting cultivation, and relatively small areas of poor "Moss Forest" on the exposed ridges of the higher hills, are omitted. The forests in general consist of evergreen varieties of every mixed nature; it is estimated that the number of indigenous tree species is more than 2,500, over 100 of which may occur on a single acre; however, not more than about 250 of these species can be considered of commercial importance as timber. The whole area of lowland tropical rain forest covers approximately 34,000 square miles, or 72 per cent of the land area of the Colony. Much of this forest is still inaccessible but, if the internal communications of the country can be improved, most of it must be regarded as potentially productive.

This great stretch of rain forest can be divided into a number of classes dependent mainly on soil types. The principal classes are described below.

(i) *Mangrove Swamps*. These are tidal swamps situated in sheltered places at the mouths of some of the larger rivers. The forest is similar to other mangroves occurring throughout the eastern tropics and their most valuable products are firewood, charcoal and cutch. Their total area is estimated at 466 square miles, but only about half of this contains true mangrove, the remainder being occupied by nipah palm or by very poor forest in the drier parts of the swamp.

(ii) *Peat-Swamp Forest*. The greater part of the coastal belt of Sarawak consists of swampy land with a deep peat soil. These swamps at places extend for as much as 50 miles inland, and cover over 6,000 square miles. About 5,770 square miles of this is forest of a very valuable type which, owing to its accessibility, now forms the chief source of the Colony's timber supplies. Various distinct sub-types of swamp forest occur.

Of these the most important can best be described as Mixed Swamp Forest, in which the principal timber trees are usually ramin, various species of meranti, medan jongkong, semayur, kapur payar and jelutong. Another very interesting type is alan forest, often almost pure and estimated to cover an area of approximately 800 square miles.

(iii) "*Kerangas*" or "*Heath Forest*". This type of vegetation occurs on areas of very poor, acid soil scattered throughout the country and probably not aggregating more than 3,000 square miles. Much of this forest is of very poor quality and even in the better parts the trees are of comparatively small size. Nevertheless these forests are often of considerable value. In places they contain almost pure stands of ru ronang, which is one of the world's best fuel woods; and they also carry fairly rich stands of the conifers bindang and sempilor, which are not otherwise available except on steep and inaccessible hills.

(iv) *Riparian Forest*. Rather narrow strips of riverine alluvial soils, rarely more than half a mile wide, carry a special type of forest which varies mainly in accordance with the nature and speed of the rivers. In the upper reaches of fast flowing streams, the forest often consists chiefly of various species of engkabang, which are the main source of the valuable, oil-bearing illipe nut. Where the streams first change to comparatively slow-flowing rivers, however, the nature of the forest changes too, and belian usually becomes the most important species. Riparian forests of this type probably do not total more than a few hundred square miles.

(v) *Other Types*. The remaining forest, covering about 25,000 square miles, is found on various less specialised soils. It is very mixed, containing a multitude of species, dominated, however, by those belonging to one botanical family, the Dipterocarpaceae. The forest is very dense, and the trees reach a considerable size, the forest roof being generally about 150 feet above the ground. Below this roof, formed by the larger species, there are numerous layers of smaller, shade-bearing trees, but small herbaceous vegetation is scanty because very little light reaches the ground. On the other hand, climbing plants, such as lianes and canes, are fairly abundant.

Timber production is mainly in the hands of British, Australian and Chinese firms, and by the end of 1951 there

were 44 sawmills operating. Circular saws are almost universally used, only one mill being equipped with two bandsaws.

Thanks mainly to the example given by the larger and more recently established logging companies, timber extraction methods continue to improve, although the rate of progress is retarded by the difficulty of obtaining, and the present high cost of such equipment as rails and locomotives. The Borneo Company Limited increased its elephant herd from 5 to 22 during the year.

In 1951 the outturn of commercial timber was 9,096 tons of 50 cubic feet converted and 91,779 tons of Hoppus feet of logs, representing an increase of about 27% over the total in 1950. Although timber exports, particularly to Australian ports, were adversely affected by an acute shortage of shipping during the first half of 1951; the situation improved towards the end of the year, and the total amount exported was 39,648 Hoppus tons round and 14,947 cubic tons sawn representing an increase of 19% over 1950. The United Kingdom which took only 7,328 tons in 1950, became the leading importer in 1951, taking 27,082 tons or 39% of the round timber cut for export. Hong Kong was the second largest importer taking 25% of the total cut, whilst Australia, which was the leading importer until the end of 1950 dropped to third place with 23%. Relatively small quantities of timber were sent to various Borneo ports, mainly Brunei and the Natuna Islands, to Singapore, South Africa, New Zealand and Japan. The bulk of the timber exported was made up of *ramin* (*Gonystylus* spp.) and *meranti* (*Shorea* spp.).

Apart from its general duty of the supervision of forest industries, the main task of the Forest Department at present is the selection and reservation of land to be kept under forest in perpetuity, both for the permanent production of timber and other products and for the prevention of erosion and floods. Under the Forestry Development Plan, which is aided by a Colonial Development and Welfare grant, good progress has been made with the constitution of permanent forests. By the end of 1951 a total of 6,406 square miles had been reserved and a further 2,132 square miles were in process of reservation. The Development Plan defines additional "zones of interest" totalling some 11,700 square miles which will in turn be examined and then either constituted or abandoned as may be considered advisable.

The inventory of forest resources that forms the second major part of the plan is being carried out by a variety of methods. In some parts of the country, particularly the peat-swamps, the work is greatly facilitated by aerial photographs, on which the principal forest types can be easily detected. All that is then required is mapping from these photographs with adequate ground checks, and the growing stock is assessed by random sampling in selected areas. In the inland forests, on the other hand, few of the important types can be recognised on aerial photographs and systematic sampling, at intensities of 1 to 5 per cent., or even more in special cases, is usually necessary, as there is frequently a patch-work of various forest types and quality classes even in quite small areas. One special and urgent objective of this inventory is an assessment of remaining sources of belian, accessible supplies of which are becoming scarce. Future policy with regard to this remarkably strong and durable timber is still doubtful and depends on the results of the inventory.

Forestry research is at present concerned mainly with experimental plantations, with a view to the reclamation of impoverished soils and the rehabilitation of forests degraded by shifting cultivation. Both mahogany (*Swietenia macrophylla*) and ru ronang (*Casuarina sumatrana*) show considerable promise of success despite shoot borer and collar weevil attack in the former species. The latter species is not a timber tree but yields firewood of a very high quality and may therefore be of great value in densely populated localities. It is still considered too early, however, to embark on any large-scale projects of this nature. Trial areas have also been planted with durian (*Durio* sp.) in swamp forest near Kuching.

A start has been made with the formation of a reference collection of authenticated wood specimens, considered to be a very necessary step in view of the increasing number of enquiries on Sarawak timbers. A valuable nucleus for this was provided by a collection of 100 species, most of which occur in Sarawak, generously presented by the Forest Department of North Borneo. A limited number of sets of small hand samples are available for distribution. Steps are also being taken to improve the reference herbarium at Kuching that suffered much loss and damage during the period of Japanese occupation, and a considerable number of specimens were added during the year.

A training course at Kuching for subordinate field staff now takes place annually and includes instruction in surveying, silviculture and the identification of trees and timbers. This year eight Foresters and Forest Guards from various parts of the Colony attended the course and all succeeded in passing the examinations.

The following statement gives comparative figures of revenue and expenditure for the years 1950-51.

	1950.	1951.
Revenue ...	\$389,090	\$486,733
Expenditure ...	141,258	238,907
	<hr/>	<hr/>
Surplus ...	\$247,832	\$247,826
	<hr/>	<hr/>

The expenditure for 1951 quoted above excludes \$37,891 from Colonial Development and Welfare funds.

Export duties on minor forest produce, collected by the Customs Department, amounted to \$354,999, as compared with \$254,714 in 1950. The chief contributors towards this total were getah jelutong and damar.

(E). MINERAL RESOURCES.

The mineral resources of Sarawak comprise oil, gold, coal, antimony, mercury, bauxite, diamonds, limestone used for lime manufactured and suitable for cement, clay used for bricks and tiles and some types of pottery, building stone, and phosphate. Small occurrences of silver, lead, copper, gypsum, ilmenita, zircon, and iron ore have been recorded, sapphires have been found, and salt is worked by native methods in the interior; kaolin was discovered during 1951. The oilfields of northeast Sarawak, and the gold in the west, are the mineral deposits that have received the closest examination, but, in common with the other minerals, much work remains to be done before their full potentialities are known. Mineral occurrences, particularly of gold, coal, antimony, and mercury, have been reported from a number of widely separated localities.

Little was written in the past about Sarawak's minerals, but they did receive attention. Between 1850 and 1900 an energetic search was made for deposits, particularly coal, also antimony, mercury, and gold. Investigations were made by

individuals employed by private concerns as well as by the State Government. Unfortunately virtually none of the information resulting from the work was published, and records available are insufficient for assessing the full extent of the investigations. Minerals have, however, played an important part in Sarawak's development. From 1823, after the discovery that antimony ore had a ready market, they figured prominently in the economy. Until about 1885, antimony ore was generally the most important mineral produced and, in the early days, often the leading export. Mercury was the leading mineral product for five of the six years between 1874 and 1879 inclusive, but after 1887 output declined and ten years later was negligible. Coal was the main mineral export between 1889 and 1898, after which gold took its place and headed the list continuously from 1899 until 1920. From this time onwards oil has been the leading mineral export. The relationship of mineral products to the country's total export is shown in the table below :

PAST SARAWAK MINERAL PRODUCTION.

Value of Sarawak Produce exported.	Value of Mineral exports.	Percentage of Mineral exports to exports of Sarawak produce.	Mineral Royalties paid to the Sarawak Government.	Mineral exports in their order of value; the most valuable export is shown first.
N.A.	38,001	—	N.A.	Antimony, quicksilver, gold, diamonds.
809,325	83,086	10	13,333	Antimony, quicksilver, gold, diamonds.
1,322,325	118,915	9	8,889	Antimony, coal, quicksilver, gold.
3,089,017	323,230	10	10,177	Coal, antimony, gold, quicksilver.
5,732,723	1,177,266	21	77,367	Gold, coal, antimony, quicksilver.
9,221,459	N.A.	—	98,109	Gold, oil, coal.
53,302,340	39,208,846	74	770,835	Oil.
23,244,666	12,482,134	54	387,636	Oil, gold, silver.
166,023,615	111,820,069	67	67,320†	Oil, gold, antimony.

All values given in Sarawak dollars fixed at 2s. 4d. sterling since 1906.

N.A.=not available.

†Estimated oil royalty, and mining rents and fees; most of the oil exported during 1948 was produced in Brunei.

MINERAL PRODUCTION IN 1951.

The output of minerals and mineral products during 1951 consisted of oil, gold, phosphate, bricks and tiles, lime and stone. Their estimated value was \$3,419,500, and over \$121,000 was paid as direct revenue in the form of royalties and mining rents to the Government. The value of mineral exports was \$303,260,500, and consisted of oil and gold. Most of this oil however came from Brunei, was piped to Sarawak, and some of it treated at the Lutong Refinery; exports comprised crude oil, gasoline, kerosene, gas oil, fuel oil, diesel fuel, and diesel fuel bunkers. The oil industry, a Shell Group organization, operates on a large scale using modern methods. The other mineral industries are mainly in the hands of small Chinese concerns; gold mines which are situated in the Bau District of west Sarawak number six; building materials are produced at the three main towns, Kuching, Sibuan and Miri. Deposits of Kaolin which may in future be used for making pottery locally were discovered during the year.

Mining leases in 1951 totalled 25 and covered 3,939 acres as compared with 24 miles in 1950 and covering 3,930 acres. This is the only land in the 47,000 square mile territory reserved for mining; the Sarawak Oilfields Limited has general oil rights over the whole territory. The British Aluminium Company Limited continued to prospect for bauxite and extended their search from west Sarawak eastwards into the Third Division. Gold prospecting was mainly limited to the Bau District where tests were made by the Borneo Company Limited, Anglo Oriental (Malaya) Limited, and a few local Chinese prospectors.

Numerous minerals occur in Sarawak but the present development of the country is too limited to justify the mining of the lower priced materials for local requirements. Working difficulties, poor communications, a limited working population, isolated mineral occurrences, and uncertain markets are some of the obstacles which deter mining for export. However, as the territory develops, communications improve, and a local internal market is formed, the country's own mineral resources will be capable of meeting many of the main requirements. The coal deposits could probably supply most local needs likely to arise, and it is known that limestone exists suitable for lime and cement, clays for bricks, tiles and pottery, stone for roads, guano for fertilizers; oil and gold are already worked and occurrences of antimony

ore, mercury ore, bauxite, ilmenite, zircon, etc. are known. The 1951 mineral output is shown below.

SARAWAK MINERAL PRODUCTION IN 1951.

MINERAL	PRODUCTION.	REMARKS.
		Valued at \$2,638,796; royalty paid was \$98,252.
Oil	372,780 United States barrels	Oil exports from Sarawak totalled 4,947,598 long tons valued at \$303,186,679 and included gasoline, diesel, kerosene, gas oil, fuel oil, and crude oil. Most of this oil was produced in Brunei but piped to Sarawak and some of it treated at Lutong Refinery before being exported.
Gold	931 fine ounces	Valued at \$73,780; a royalty of \$3,689 was collected, and mining rents yielded \$8,237. The output came from six mines in the Bau District.
Phosphate	649 long tons	Estimated value \$75,491; royalty paid was \$10,944. Extracted from Niah Caves, Bukit Subis, Fourth Division.
Bricks and Tiles	2,215,500 bricks 375,000 tiles	Estimated value of bricks made is \$288,015 and of tiles \$52,500. The output of 5 concerns at Kuching was 1,011,500 bricks; around Sibü 3 companies produced 775,000 bricks, and at Miri 2 companies made 429,000 bricks.
Lime	1,113 long tons	Estimated value \$130,900. Made in the Kuching area by Chop Mong Soon, Ban Hin Company, and Swee Huat Seng.
Stone	40,100 cubic yards	Estimated value \$160,000. This stone, produced in the First Division, came from the 7th, 18th, and 28th mile quarries, also from a working at Bau. Only negligible quantities of stone were worked elsewhere in Sarawak.

Values are in Straits dollars, \$1 being worth Sterling 2s. 4d.

Oil continues to be the most important mineral product; it comes from the Miri oilfield, situated on the coast and worked by Sarawak Oilfields Limited. In 1951 production decreased to 327,780 barrels valued at \$2,638,796, compared with the 1950 output of 414,196 barrels valued at \$2,706,555. This decrease is however not surprising as Miri field is now over 30 years old, production by the Shell group having commenced here in 1911. The oilfield is close to the Brunei border, and near the Seria field which is now the Commonwealth's biggest producer. Although Miri production is decreasing, the search for new oilfields was energetically carried out during 1951 over a wide area of Sarawak.

This search is described below; the account is based mostly on information kindly supplied by the oil company. Geological mapping was carried out by three parties of oil company geologists during the year. One party made a reconnaissance survey in the Limbang-Lawas area for 3 months, and then moved to the Balingian-Mukah-Oya area. A reconnaissance survey of the area between the Bintulu and Tatau rivers was made by a second geological team, while the third worked in the area north of the Bintulu river as far as the Nyalau river. Geophysical surveys were in progress in addition to geological mapping. Two seismic parties were at work; one in the Miri-Tudan and Marudi area, while the other made two investigations, one west of the Miri oilfield and the other west of Kuala Suai. These latter were investigations of a type unusual and relatively new in this region, and consisted of marine surveys along the coast. Gravity work was also carried out from Bulak Setap southwards towards the Bintulu river. Past geological geophysical surveys have indicated that there is a chance that there may be oil reservoirs in the Bulak Setap and Subis river areas. The possibilities are now being tested by deep drilling, and two holes which will penetrate to depths of about two miles below the surface, were commenced in 1951. Work on these deep test holes has proceeded steadily and it is expected they will be completed during 1952. The drilling at Subis commenced in March, 1951; at the end of the year a depth of 5,210 feet had been reached and the hole was in shale of Miocene age. The drilling at Bulak Setap, some 25 miles south of Miri, was commenced in August and at the end of the year had reached a depth of 5,795 feet. Early in 1951 another test hole was drilled in the northern portion of the Rejang estuary near Kuala Igan to test the thickness of the

younger Tertiary sediments with which oil is associated elsewhere in British Borneo. In the Rejang area these deposits were found to be relatively thin, and at a depth of 1,600 feet had been passed and older rocks of Eocene age reached in which the chances of oil occurring are remote, this drilling was therefore discontinued.

Gold production in 1950 totalled 931 fine ounces estimated to be worth \$75,491: it was obtained from six small Chinese mines in the Bau District. This is a decrease compared with the 1950 output when 1,440 fine ounces were obtained.

This decrease was due to several causes. Mining was handicapped by both the shortage and high cost of labour, also by the deterioration of the roads serving the area; along these roads are normally transported the supplies, equipment, and even ore from some of the mines. The cost of equipment increased considerably, particularly such items as compressors, crushers, and diesel engines. These difficulties were not mitigated by any compensating changes, the price of gold remaining unaltered, and the output being sold to Government at the internationally controlled price.

Gold prospecting continues in a small way in spite of the discouraging conditions of high labour and equipment costs, and a low gold price. The Borneo Company Limited have a mining engineer prospecting in the Bau district, and have taken out a prospecting licence over part of the Poak river area. Alluvial gold deposits in this district were worked by Chinese more than 30 years ago, but it is alleged that the local Dayaks then would not agree to large scale mining. The possibilities of working gold from the alluvial deposits by dredging was examined during the year by Anglo Oriental (Malaya) Limited. Alluvial areas were bored along the Sarawak river, both in the vicinity of Bau, and in the lower portions of the valley. Their work confirmed that gold occurred in the alluvium, but indicated the quantities to be insufficient to repay dredging. This is unfortunate as there are extensive alluvial flats, and if dredging had been profitable a steady output would have been possible over a number of years. This company also tested alluvial gold occurrences at Marup, near Engkilili in the Second Division. Here it was again found that gold occurred in the alluvial deposits, but in insufficient quantities to be worth dredging.

Phosphate production amounting to 649 long tons was the highest yet obtained. The value was \$75,491 and a royalty of \$10,944 was paid to Government; in 1950 the output was 643 long tons, valued at \$38,880, and yielding \$5,400 royalty. The output comes from guano deposits in the Niah Caves at Bukit Subis in the Fourth Division. The deposits here are the largest in Sarawak and are worked and marketed under the supervision of the Agricultural Department. Guano is common in limestone caves elsewhere in the country, but the deposits are smaller than those at Niah Caves. The production figure given above includes neither the small amounts of phosphate extracted by the Niah Cave owners for their own use, nor small amounts collected to supply local requirements from caves elsewhere in Sarawak. Deposits containing about 2,000 tons of guano have been examined at Gunong Staat south of Kuching, and small amounts have been found in caves at Gunong Selabor, south of Serian. One of the Department's geologists mapped and investigated during 1951 the main phosphate occurrences in British Borneo.

The Niah caves are estimated to contain about 29,000 tons of phosphate; they consist of approximately 2 miles of explored passages and cover an area of approximately 24 acres; small streams and water seepages from the roof are common. The phosphate deposits originate from the accumulation during thousands of years, of bat and swift droppings, and insect remains; reaction with limestone has resulted in the formation of rock phosphate.

Chemical analyses show that nitrogen is almost entirely restricted to the surface guano and decreases rapidly as the depth increases. The P_2O_5 and CaO content increases with depth reaching a maximum in the "fossil" guano near the base of the deposit. Surface guano contains on the average 6 percent P_2O_5 , 11 percent CaO, and 7 percent nitrogen; "fossil" guano averages 23 percent P_2O_5 , 22 percent CaO, while nitrogen rarely reaches 1 percent and is often absent.

Building materials produced comprise bricks, tiles, lime and stone; during 1951 the value of the output was estimated at \$631,400. The industry is mainly run by Chinese and operates on a small scale serving local requirements around the

main population centres of Kuching, Sibul and Miri. The output could be increased if demand increased. Kuching, situated in the most developed part of the country, had the largest and most varied production of constructional materials—bricks produced totalling 1,011,500 tons— while the lime output was 1,113 long tons estimated to be worth \$130,900. The clay and sand used for brick and tile manufacture comes from the valley of the Sarawak river, and the limestone used for making lime from Gunong Staat. Building materials were also produced at the other two main population centres of Sibul and Miri. Sibul district had a production of 775,000 bricks, kilns being operated at Binatang, Durin and Sungai Sadit; there was no output from the Sarikei works. At Miri 49,000 bricks were produced by two companies. The estimated average value of bricks produced during 1951 was \$130 per thousand, tiles \$140 per thousand, and lime \$7 per pikul (16.8 pikuls equal 1 long ton).

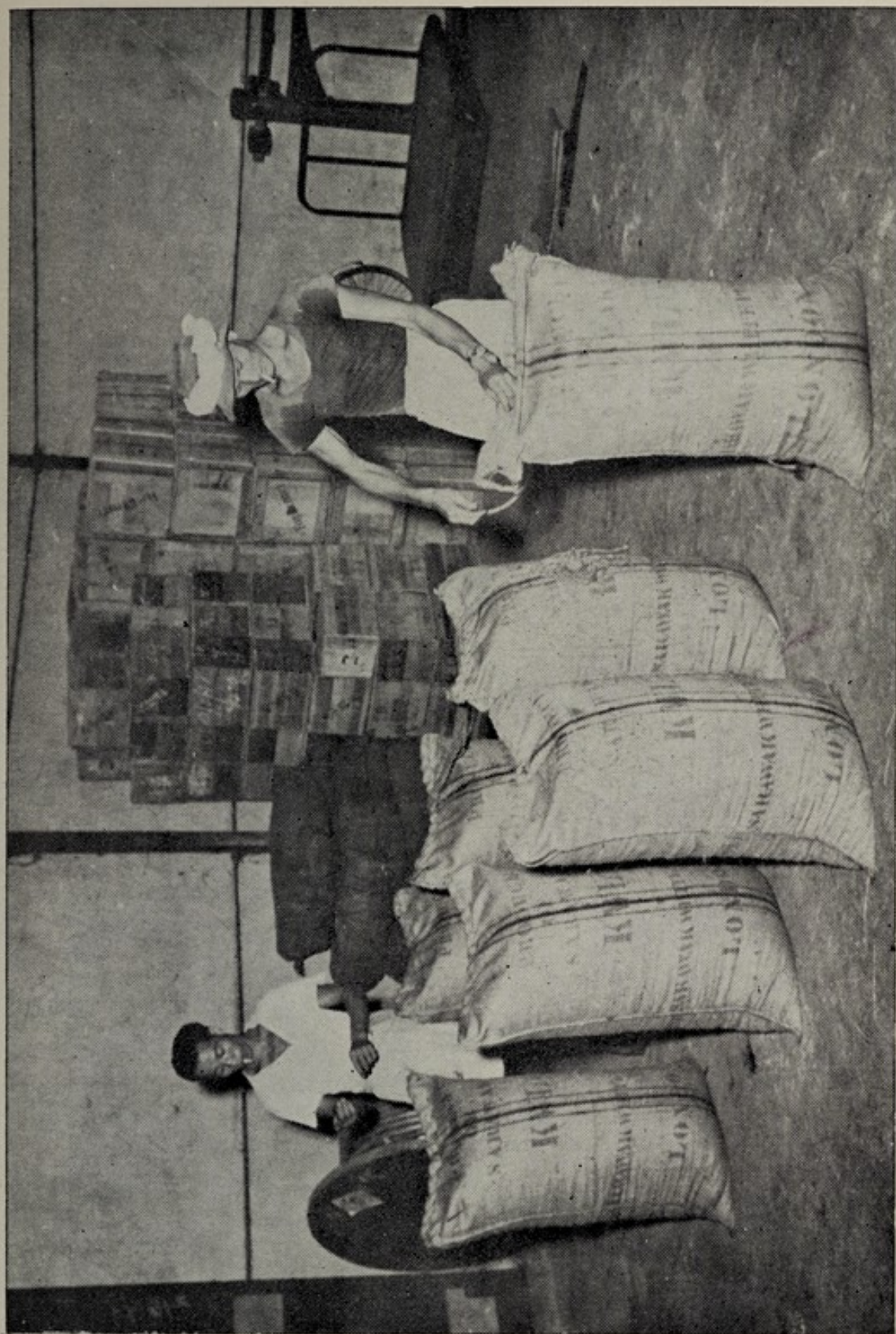
Stone production recorded in 1951 was 40,100 cubic yards with an estimated value of \$160,000. This was obtained in the First Division from quarries at the 7th, 18th and 28th miles on the Kuching-Serian road, and from a working at Bau; elsewhere only negligible quantities of stone were worked. Most of the stone was used for road construction and road repairs; the bulk of it—32,000 cubic yards—was andesite porphyry, from the Bukit Stapok quarry near the 7th mile from Kuching.

Aluminium ore, discovered during 1949 in the Sematan area of west Sarawak, was prospected during 1950 and the work completed in 1951. Sematan is a coastal village located some 42 miles in a direct line west-northwest of Kuching. The best bauxite found to date occurs in this district, and for a radius of about 20 miles from this village it is relatively common. Most occurrences however comprise merely a few fragments of ore, and deposits of a marketable grade or workable quantity are few. Mere showings of this type have been found in this district at Ulu Sungai Pueh, Sungai Melanau, Kampong Sedopit, and at Gunong Puting. A number of larger occurrences are listed below, but even of these probably only the first 3 listed contain ore worth mining.

- (1) Munggu Belian
- (2) Bukit Gebong
- (3) Tanjong Serabang

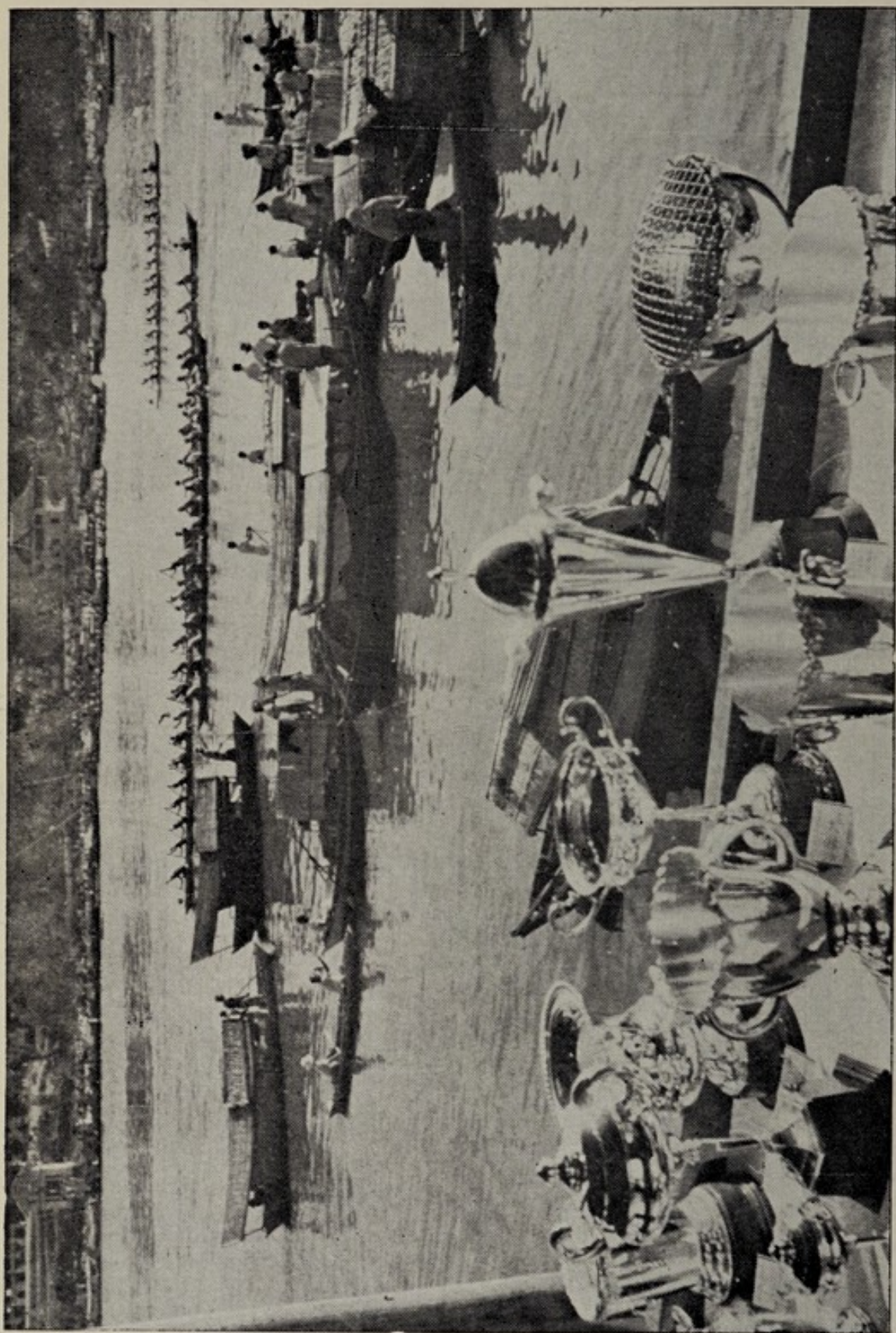
- (4) Gunong Tamin Tungku
- (5) Ulu Blungei Kechil
- (6) Gunong Angus
- (7) Kranji
- (8) Ulu Sungai Limoh
- (9) Pelandok
- (10) Titi Akar

The amount of ore that might possibly be worth working at these occurrences is estimated to be about 5,500,000 long tons. During 1951 the British Aluminium Company's geologists and mining engineers, extended their search for bauxite from the First Division eastwards into the Second and Third Divisions, and by the end of the year were making reconnaissance examinations of the Rejang valley. For most of the year the company had two geologists and two mining engineers employed on field work.



Sarawak white pepper being bagged for export at Kuching.

[G.S.I.S. photograph.]



[G.S.I.S. photograph.]

The Kuching Annual Regatta in progress.

VIII

Social Services.

(A) EDUCATION.

General and Administration.

The senior staff approved for the Education Department during 1951 consisted of a Director and eleven Education Officers. To provide for the better supervision and inspection of the expanding school system two new posts of Education Officer were created during 1951. One of these posts was for a Divisional Education Officer in the Second Division, and the other was for an officer to serve as relief during periods of leave. At the end of the year the creation of new posts of a Deputy Director, an Inspector of Schools, and two Group Supervisors, (Man and Woman) were approved. An additional Education Officer, for the 4th and 5th Divisions, was also approved.

In addition to the Group Supervisors named above, five of the more able and experienced of the trained teachers were selected at the end of 1951 to act as Group Supervisors, Grade IIIA, and arrangements were made for them to attend a special course at the Training Centre before taking up their duties.

The standard of staffing in all types of school continued to improve both as regards the number and qualifications of teachers. Five of the staff at the Batu Lintang Training Centre and School successfully passed their examinations and were certificated as Grade IIA teachers. The second output of 48 certificated teachers, Grade IIIA, (not including 9 Brunei students) from the Training Centre at the end of 1950 benefited rural schools under the management of Government, Local Authorities, Missions and Private Committees. There was a small but important increase in the number of qualified and experienced expatriate staff in the Urban Mission Schools.

Vacation courses for Chinese Teachers were held at Kuching and Sibul during June. Special attention was paid to the teaching of English but subjects dealt with also included methods of teaching the History and Geography of

Sarawak, teaching apparatus and methods, and discipline. Approximately 200 teachers have now attended one or other of the courses held at Sibul. These courses appear to be resulting in an improvement in the teaching of English and particularly in the use of oral methods, an increased use of local material in History and Geography, and in closer personal relationships between teachers and the staff of the Department.

The School population rose from 39,423 in 1950 to 42,284 at the end of 1951. Most of this increase was accounted for by increased enrolments in the Chinese Primary School system. Although there was an increase in the number of schools of various types catering for children of the indigenous peoples, the number of these children enrolled showed only a small increase in some sections and a small decrease in others. In these new schools for the indigenous people some decrease in enrolment after the first few years seems to be a natural development, since, when these schools are first opened, their numbers are often swollen by the admission of many over age pupils. As these over age pupils pass out of the schools the enrolment becomes stabilised, at a lower figure, with a regular intake annually of children attaining school age.

In some areas the high prices obtainable for rubber and other produce has resulted in parents removing their children from school to assist them in their work. There was a considerable increase in the number of boys and girls studying in the Secondary classes of urban English Schools. From these schools 45 candidates sat for the Cambridge University Overseas School Certificate examination compared with 28 candidates in the previous year.

The number of girls in all types of school increased during the year. In Local Authority Schools, however, which cater mainly for children of the indigenous peoples, the number of girls is still small. The first three women student teachers at Batu Lintang Training Centre successfully completed the two year course and graduated in November. Two other women teachers completed two years' training in Domestic Science and graduated as Domestic Science teachers in December. Training for teachers in this subject continues and it is hoped that by 1954 it will be possible to open two

Centres in Sibü. Two of the Mission English Schools in Kuching now have their own Housecraft rooms.

By the end of 1951 the Local Authority School System had completed four years of existence and it was possible to make some appraisal of its merits and weakness. As was expected, the devolution of responsibility to inexperienced local bodies has resulted in some loss of professional efficiency. For example in their eagerness to open new schools some Authorities have expanded their schools system to the limits of their finances, allotting too little money to the purchase of equipment for existing schools, and failing to budget for automatic increases in expenditure such as increments for serving teachers and probable rises in cost-of-living allowances. On the other hand the assumption of responsibility for primary education has led to considerable interest in educational development. The discussion of School affairs usually occupies the greater part of Local Authority meetings. At these meetings the Authorities have shown an increasing understanding of the problems of attendance, equipment, curricula and other matters that concern their schools. Several Authorities have recently turned their attention to the drafting of Education Rules and shown an imaginative and determined approach to the problem of ensuring that pupils complete the 4-year course.

Another encouraging feature is the introduction by some Local Authorities of education cesses and School fees even in some cases where Local Authorities have taken over where were previously free "Government" Schools.

The Authorities do not finance from their funds the construction or maintenance of school buildings or furniture. The responsibility for buildings and furniture is devolved a stage further to village committees. This arrangement requires a constructive effort from the village people before the Local Authority will agree to post a teacher. Thus the greater part of the Local Authority Funds available can be allotted for the payment of teachers' salaries and equipment, and at the same time village communities are stimulated to provide their own buildings and are prevented from regarding the Local Authorities as a mere extension of the central Government. The value of these Committees has varied much. Some are apathetic and others tend to interfere in matters which

should be left to the teacher. Others have been marred by local rivalries. In the more progressive areas however Committees have been active in organising the maintenance of school buildings, athletic and social activities, and assisting the school in other ways. These Committees have provided an outlet for local interest in education and an opportunity for public service within the village.

In the Third Division the Chinese Schools Common Examination Board which in 1950 had conducted its first Primary Examination, successfully held its first Junior Middle Examination in 1951 in addition to the Primary Examinations. The Board meets under the chairmanship of the Divisional Education Officer. The Board has done much to improve the efficiency of the schools and has led to useful co-operation between the Managements and the Department.

There was increased evidence during the year that Communist agencies were infiltrating into Chinese Schools and Youth Movements. This became particularly evident at one of the main urban Chinese Schools where the control, discipline and morale deteriorated seriously.

In dealing with these increased activities of subversive elements the department was seriously handicapped by the lack of Education officers with a knowledge of the Chinese language. Attempts to recruit officers with such qualifications continued.

In the meantime there were two practical steps which could be taken. One was, with the assistance of school authorities and the public, to close the loopholes being utilised by the Communist agencies; by strengthening parental control, organising out-of-school activities and ensuring that pupils from outstations were controlled more satisfactorily. The second was to make every effort to prevent doubtful persons from entering the teaching profession and to terminate the employment of serving teachers whose influence on pupils was unsatisfactory.

Fifteen Dayak boys from Primary Schools were admitted to the Apprenticeship Course at the Preparatory Trade School of the British Malayan Petroleum Co., Seria. Very favourable reports were received on the progress of these boys.

The Advisor to the Secretary of State on Technical Education, Dr. F. J. Harlow, M.B.E., visited Sarawak during

the year. Dr. Harlow held discussions with various individuals, and with representative groups in the 1st, 2nd and 3rd Divisions and gave very valuable advice on the future development of Technical Education and Trade Training.

Sarawak continued to maintain and strengthen its association with the University of Malaya, and contributed during the year 1951 towards the university's expenditure. Several officers of the University visited Sarawak during the year and useful discussions were held with them on educational matters.

During 1951 various problems relating to the system of Grants-in-Aid and to the methods of assessing the Central Government's contribution towards educational development under Local Authorities grew more complex and it became evident that a full enquiry into the best methods of financing education in the Colony was an urgent necessity.

After discussions with representatives of various schools, a uniform system of nomenclature for school classes was agreed upon and put into force.

Pupils at all the main Schools in Kuching were Tuberculin Tested and, where necessary, given B.C.G. vaccination.

The Education Ordinance, which had been enacted in 1950, came into force on 1st January 1951.

Finance.

The following figures indicate the increasing expenditure from official funds on educational services :

	1940.	1950.	1951 (estimate).
Central Government funds ...	\$166,881	\$416,660	\$751,535
Local Authority funds ...	nil	93,942	168,451
Colonial Development and Welfare Schemes ...	nil	178,821	212,773
Total ...	\$166,881	\$689,423	\$1,132,759
	£19,469	£80,433	£132,155

It was estimated that during 1951 the Mission Authorities spent approximately \$558,300 (£65,135) and the Managements of Chinese Schools some \$1,967,280 (£229,516) on educational services. These amounts were mainly derived from school fees and subscriptions and were additional to

grants-in-aid from Government or Local Authority funds. The figures quoted above do not take into account the value of contributions made by school committees, in money or in materials, for the construction and maintenance of school buildings and furniture.

Government Schools.

At the end of 1951 there were 45 Government Schools staffed by 105 teachers and with 3,641 pupils on the roll. The corresponding figures for 1950 were 47 schools with 102 teachers and 4,037 pupils, in addition to the Batu Lintang School. Two Government Schools were taken over by a Local Authority during the year and one school where there was insufficient support from parents was closed. The decrease in the number of pupils attending Government schools is explained mainly by the transfer and closing of these schools.

At most of the Government Schools the local people are now required to provide and maintain the school buildings, furniture and teachers' quarters. The teachers' emoluments and the cost of equipment are met from Government funds. No fees are charged but the pupils are required to provide their own stationery. School Committees with advisory powers function at a number of these schools.

With the exception of one school in Kuching at which post-primary classes have been established, all these schools cater for the primary course only. The vernacular is the medium of instruction. There is now a strong demand for English. This has been met by the engagement of English-speaking teachers in a few of the larger schools, and by the inclusion of English in the curriculum of the Teacher Training Centre. By the end of 1951 trained teachers from the Centre who had been posted to Government Primary Schools numbered 24 and most of these were able to introduce the teaching of English as a subject.

At the Government School at Batu Lintang, which is run in conjunction with the Teacher Training Centre, post-primary academic courses were held for boys who had completed the primary course in vernacular schools. 24 new pupils, including 8 from Brunei, were admitted at the beginning of 1951, bringing the total in these classes to 67.

Local Authority Schools.

At the end of 1951 there were 74 Local Authority Schools with 90 teachers and an enrolment of 2,868 pupils. The corresponding figures at the end of 1950 were 67 schools with 77 teachers and 2,545 pupils. A number of new Local Authority Schools opened during the year but sickness or resignations of staff caused a few schools to close temporarily. Of the 7 additional schools in existence at the end of 1951 two had been transferred from the central government.

The increase in the number of pupils attending Local Authority schools was small but the average age of children in these schools and their distribution in the classes showed improvement. There were fewer over-age pupils and the age of new admissions was more satisfactory. The general standard of efficiency in these schools, though still low, showed improvement, especially in parts of the 2nd Division. There was an excessive number of transfers of teachers and Authorities had to be reminded of the need for continuity in the staffing of schools.

Six Local Authorities have decided to raise additional revenue for education by charging an Education Rate. All the authorities introduced for their teachers the new rates of Cost of Living Allowance authorised for employees of the Central Government service.

Private Schools or Village Committee Schools.

In areas where no Local Authority had yet been formed, the indigenous peoples were encouraged in the meantime to open schools under management of Committees comprising local representatives. These "Village Committee Schools" or "Private Schools" receive financial assistance from Government. There were 30 schools of this type at the end of 1951 with 41 teachers and 1,408 pupils. The corresponding figures for 1950 were 35 schools with 45 teachers and 1,769 pupils. 6 Private Schools were taken over by Local Authorities during the year. A few new schools were registered and a few schools which had been registered provisionally did not continue after the expiry of their provisional certificate. About half the number of Private Schools appear to have become fairly stable and well-established. Grants from Central Government funds amounting to approximately \$7,245 (£845), as compared with \$5,821 (£679) in 1950 were paid during the

year to those schools which applied for assistance. A number of Private Schools received professional guidance from the Mission representatives in the area.

Mission Schools.

At the end of the year there were 69 of these schools with 263 teachers and 7,988 pupils. At the end of 1950 there were 59 schools with 243 teachers and 7,166 pupils.

Grants from the Central Government amounting to \$122,140 (£14,250) were paid to Mission Schools during the year as compared with \$93,849 (£10,949) during the previous year. For the urban schools which cater mainly for the Chinese the Grant was calculated on a percentage of the salaries of approved staff while a more favourable formula was in force for the rural schools catering for the indigenous peoples.

In the urban schools English is the medium of instruction and these schools provide a large proportion of the entrants to the Government Service. At 12 of these schools, secondary classes were provided in which 1,315 pupils were enrolled. 96 candidates entered for the Cambridge Junior School Certificate at the end of 1951 and 77 were successful. In the previous year 73 out of 93 entrants were successful. Classes for the Cambridge School Certificate were held at 4 schools and 45 candidates, of whom 9 were girls, sat for this examination at the end of 1951. 37 candidates obtained the School Certificate. These figures compared with 23 successful candidates out of 28 entrants in 1950. The number of Grade I certificates rose from 4 in 1950 to 15 in 1951.

Some of the larger Mission Schools in urban areas extended and improved their buildings; and now class room blocks and Domestic Science rooms were built or planned in Girls' Schools, and Science Laboratories equipped at Boys' Schools during the year.

Improvements in the staff position made it possible for these schools to widen their curriculum. Pupils are now being prepared to take the General Science paper in the Cambridge School Certificate examinations. The permission of the Cambridge Syndicate has been obtained for the examination in this subject to be held in Kuching in 1952. It was agreed to introduce Oral English Tests in the Cambridge Examinations in 1952.

A few new Mission Schools were opened in rural areas. In such rural schools the vernacular is the medium of instruction, English being taught as a subject.

Chinese Schools.

There were 216 Chinese Schools at the end of 1951, with 874 teachers and 26,365 pupils. The corresponding figures for the previous year were 215 schools with 804 teachers and 23,906 pupils. Most of these schools were controlled by committees elected annually by the local community. Funds are provided by school fees from pupils and by donations and subscriptions from Associations and individuals. During the year "block" grants amounting to approximately \$54,035 (£6,315) as compared with \$48,498 (£5,657) in 1950 were paid from Central Government Funds in respect of recurrent expenditure at 80 Aided Chinese Schools with a total enrolment of 16,881 pupils. In addition one Chinese School was aided by a Local Authority.

There were 3 "Junior Middle" Schools and 7 other schools had combined Primary and Middle Departments. "Senior Middle" courses were held at two schools.

The Chinese "National Language", Kuo-Yu, is the language of instruction in Chinese Schools in Sarawak, but increased attention has been given to the teaching of English as a subject. A vacation course for teachers of English in Chinese Schools was held at the beginning of the year. Government scholarships were awarded to two Chinese women teachers to enable them to attend a course at a Teacher Training College in the United Kingdom.

The Common Examinations Board of the Chinese Schools in the Third Division successfully conducted its first Common Junior Middle Examination in Sibu at the end of the year.

A disappointingly low proportion of teachers in this section regard teaching as a career, and the short-term contracts offered by most Boards of Management result in a feeling of insecurity amongst teachers. As a result there is little continuity in staffing at most schools as resignations and transfers are far too common a feature.

Higher Education.

A Government scholarship was awarded to a Miri student to enable him to take a degree course in Science at the

University of Malaya. Another student was awarded a scholarship to take a Post School Certificate course in Malaya prior to entry to the University for the medical course. Under a Colonial Development and Welfare Scholarship, a young officer in the Legal Department was sent to the United Kingdom to study law. Sarawak has been enabled to send several students for overseas courses of study under the Technical Co-operation Scheme connected with the Colombo Plan. Under this Scheme the New Zealand Government has awarded a Fellowship to a young woman from Kuching for training as a Dental Nurse, and to an officer in the Health Department for training as a Sanitary Inspector. At the end of the year the award was announced of New Zealand Government Fellowships to two teachers from a Mission English School for Specialised teaching courses. Under the same scheme the Australian Government awarded a Scholarship to an officer in the Forestry Department for a 4 years course in Australia leading up to the degree (Forestry). A Chinese woman teacher received a bursary from the British Council for the study of education methods in the United Kingdom. The British Council also granted a six-months' bursary to a Sarawak student for the study of museum work at the Cambridge Museum of Ethnology, and a grant from the Government enabled the same student to undergo a further three months training in archaeology.

A few private students made their own arrangement for courses of higher education overseas. A Sibu boy went to Australia for a course in Electrical Engineering, and another student entered on an agricultural course in America.

Teacher Training.

Teacher-training is carried on at Batu Lintang near Kuching at a Centre which serves the whole Colony. It is at present financed from Colonial Development and Welfare funds. The staff consists of a Principal, two Assistant Principals who are priests representing the Anglican and R.C. Missions, and an assistant staff consisting of local teachers on secondment from the United Kingdom, one with qualifications in Handwork and Physical Training and the other a woman teacher trained in Infant and Junior methods.

The co-operation of Government and Missions in training at one institution teachers for all types of School continues

to be a most important feature of the Centre, at which students of many races, religions and languages have successfully developed a mutual understanding and a corporate spirit.

All student teachers receive free board, tuition and transport, and a system of personal and family allowances ensures that any promising student can benefit from the scheme, irrespective of the financial status of his family.

The course is at present of two years duration though a small number of students who were admitted with low academic qualifications have attended for an extra year. The academic standard of students on admission although improving is still low. The course includes the study of English, for which there is a demand from all peoples, and is designed to give students a practical knowledge of teaching principles and methods. Emphasis is also laid on the need to maintain and develop traditional skills and indigenous cultures. Religious instruction is arranged for both Christian and Muslim students and chapels are provided for different sects.

During 1951 there were 90 student teachers at Batu Lintang of whom 47 were in their first year and the remainder in their final year. This number was composed of representatives of 9 different races of Sarawak and included 20 students from the neighbouring State of Brunei. At the end of the year 33 Sarawak students and 10 Brunei students, completed their training and the former were posted to Government, Local Authority, Private and Mission Schools throughout the country. Three of the Sarawak students who graduated were women.

The scheme had still to be limited to a course to provide teachers for the lower primary schools. Five of the staff, however, with academic qualification of Form 3 or above, completed courses of guided study and practical work, and successfully passed the examinations for the Grade II Certificate. At the end of the year sufficient applications had been received to make it likely that a higher course could be held in 1952 catering for students from the central English schools with a minimum qualification of Form Three.

Reports on the efficiency of the teachers who have graduated from the Centre naturally vary. Many of these teachers are opening new Local Authority Schools in areas where hitherto there have been no schools whatever. The

responsibilities and the problems which face these young men are often considerable. A small number have become discouraged and lost their initial keenness. A very few, in the boom conditions of 1951, gave up teaching for more lucrative employment elsewhere. Encouraging reports however are received on the work of many of the young men turned out from Batu Lintang and their worth seems to be shown by the eagerness with which their services are sought by local authorities and other employing bodies.

At the end of the year approval was obtained for the appointment of 5 Group Supervisors of Schools. These men were to be selected from the most promising and experienced of the teachers trained at Batu Lintang, and it was hoped that they would do much to help less experienced teachers in their difficulties and to maintain their keenness.

Adult Education.

The Rural Improvement School at Kanowit provides a course which lasts two years, and is designed to help selected couples to gain a sound practical knowledge of improved methods of agriculture, animal husbandry, elementary hygiene and infant welfare, to become literate in their own vernacular and to learn simple market arithmetic. During the course students receive free tuition, board and transport and a monthly cash allowance for essential requirements. The main building consists of a community centre of an improved "Long-house" design which provides class-rooms, dining and recreational facilities and a dispensary. Students and their families live during the course both in the long-house and in individual homes of different designs, which have been built on model small holdings within the school estate. This arrangement provides pupils with practical experience of both types of accommodation by which they can begin to form opinions as to which would be the more suitable for adoption in their areas. The school grounds occupy some 200 acres, one quarter of which is reserved as forest. The remainder, which is sufficiently diversified to provide examples of typical farm land throughout the Colony, is used to demonstrate improved techniques of tropical agricultural operations. The scheme was financed from Colonial Development and Welfare funds from its inception to April 1952, when it will become a charge upon the Colony's revenue.

Efforts were made during the year to ensure that the pupils discharged in April had the fullest opportunity of putting into practice what they had learned during their training. The Principal was able to visit most of them in their home areas and valuable help was given to many pupils by Agricultural Officers and Assistants. It is clear that some pupils are already exercising a progressive influence on their neighbours by the introduction of better methods of agriculture and by improvements in the home. Of the fifteen couples which left the School in April, 1951, ten had by the end of the year induced some two hundred of their neighbours to join them in farming by improved methods. A full assessment of the results of the training will not be possible for some time, but it is already obvious that arrangements for the efficient supervision of all pupils after they return to their homes will be essential.

A literacy project was started amongst the adults of Stumbin on the Batang Lupar. Two factors commended this area as being specially suitable—first that it contained the largest concentration of Sea Dayak population in the country, and second that it was the scene of one of the Agricultural Department's large wet padi farming schemes. It was hoped that the development of literacy might be integrated with the development of agricultural methods. Unfortunately although the people were keenly interested in the latter, they betrayed but little enthusiasm for the former, and such small results were achieved that the project must be accounted a failure. On the other hand several smaller ventures, for instance in the headwaters of the Laya, proved most successful, for here there was such enthusiasm that with a minimum of counsel and help from the Department, several long-house communities achieved almost complete literacy in the course of a few months.

An effort was made to assess the demand for vernacular literature amongst the Sea Dayak public by producing a number of illustrated booklets by the Gestepoint process. These were of various types, some being instructional others having only an entertainment value, some being collections of local stories, others translations from European works (e.g. "Treasure Island"). The response by the public at large was poor and showed conclusively that the demand was insufficient to justify any printed editions at the present time. On the other hand it was found that these booklets were much in demand as supplementary readers in schools, and production

has been continued for this purpose. It is hoped that in this way the reading habit will spread and a sufficient market will be created in the course of the next year or two to justify the large-scale printing of vernacular works.

The Sea Dayak periodical "Pembrita" ("The Intelligencer") continued to be much in demand. It had hitherto been duplicated, but as this mode of production proved inadequate, it was decided to transfer the periodical to the Information Service in the middle of the year so that it could be produced in the format of an illustrated newspaper. Reorganization of the Government Printing Office, however, prevented this being achieved till the end of the year.

Night classes at a number of Chinese Schools and at a few other schools continued to be well attended. These courses generally aim at enabling adults to become literate in their own language, to learn simple arithmetic and in a few instances to study English.

Youth Work and Out-of-School Activities.

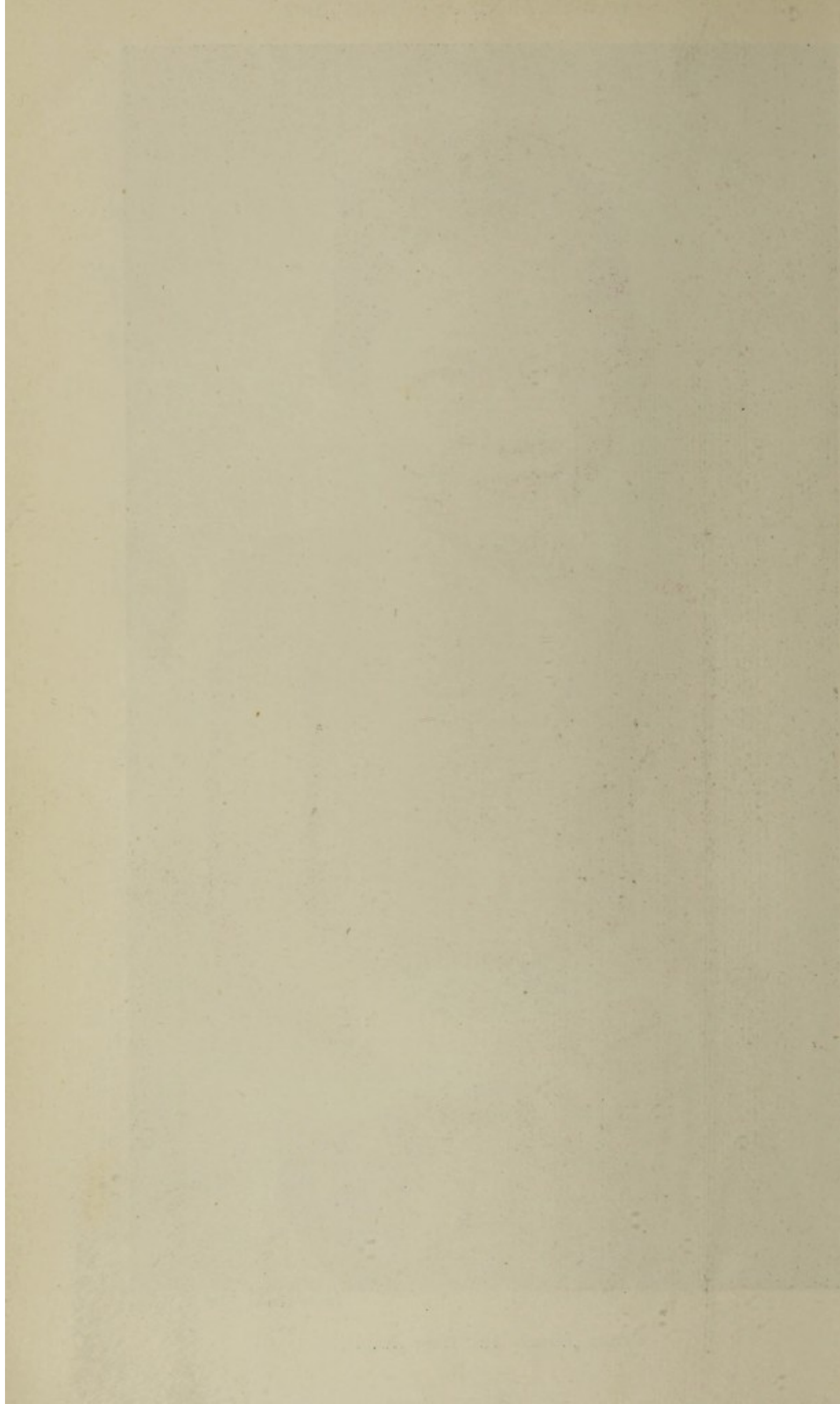
Several Associations, Clubs and Societies, some conducted by old students of schools, whose objects were to foster social, educational and cultural activities were active during the year. A few provided facilities for indoor and outdoor games.

During the year the Scout movement continued to expand, though there is still a considerable amount of work to be done before it can be regarded as fully organized. Local enthusiasm tends to outgrow organization. For example the Batu Lintang Training Centre is producing teachers who, having in the course of their training acquired an interest in Scouting, are anxious to start troops in the Schools to which they have been appointed. As a result, the number of troops is increasing but no experienced officer of the movement is available to give that local supervision, which the troops themselves demand. Indeed, not only in the schools, but generally throughout the Colony, there is a keen desire amongst young people to take part in Scouting. It is possible that in the near future a full-time Travelling Commissioner will be appointed to give the training, supervision, and leadership necessary to the advancement of a sound and healthy movement. Meanwhile a periodical, "The Sarawak Scout", has been published in English, Malay, and Chinese, to keep the various troops in touch with current developments.



[Photograph by K. F. Wong.]

Sea Dayak girl from Kapit.



The Guide Companies in Kuching continue to expand and there are growing signs of interest in the movement in Miri. The lack of officers is still a serious hindrance to expansion, and the formation of new companies. At the end of the year Kuching was visited by a Guide trainer from Imperial Headquarters, whose help and encouragement was invaluable. She spent ten days in Kuching training the Guiders and senior guides and it is certain that the time she spent here and the work she did will be apparent in the various guide activities.

During the year the Guides and Brownies have been working for the first guide sale of work, the proceeds from which are to go towards the purchase of equipment for a camp site which is to be on some land on the Agricultural Station at Tarat, in the First Division.

The inauguration of a troop of Lifeguards and Sunbeams, the equivalent of the Guides and the Brownies, took place during the year at the Salvation Army Girls' Home. These have been organized by the Matron of the Girls' Home.

The Kuching Boys' Home continued to discharge the functions of an approved school under the administration of the Education Department until the end of the year. The Department proved to be unable to deal satisfactorily with its commitments in this regard and the Home was transferred to the care of the Superintendent of Prisons pending arrangements being made for its being handed over to a specialized agency. At the end of the year there were twenty-seven boys in custody. The organization of a probation service has made it possible to follow up the careers of boys who have been released and afford them advice and assistance. It has also been possible to release boys upon parole before the expiration of their sentence. The Boys' Club and Hostel in Padungan has played an important part in providing homeless boys with accommodation upon their release.

(B) MEDICAL.

ADMINISTRATION.

Staff.

At the beginning of the year the approved medical establishment consisted of a Director, a Deputy Director, nine medical officers and a lady medical officer. All but two medical officer vacancies had been filled and all these officers were in

the Colony. There appeared to be reasonable prospects that the two vacancies would be filled and thus, in spite of three officers being due for leave during the year, the medical staff position did not appear unfavourable. In the event no further recruits were obtained and, for a period when two officers were together out of the Colony on leave, there was difficulty in meeting commitments. During the year, the approved establishment of medical officers was increased by two to meet increasing commitments and, as a serving officer resigned, the Department in fact finished the year with five medical officer vacancies. Throughout the year, a lady doctor was employed on part time duties in a station which would not normally, at this stage, be one to which a medical officer would be posted. Also late in the year, a local appointment in Kuching of a Chinese doctor, extra to establishment, was made. These could not, however, be regarded as easing staff difficulties to any material extent and so the prospects for 1952 were not bright.

The establishment of the senior nursing staff was, at the beginning of the year, a Matron, a Sister Tutor, a Health Visitor and four nursing sisters. All these posts were filled in the early months of 1951 but the Department was one officer short after the Matron's retirement in May. The necessity for additional senior nursing staff being recognised, approval was given in April for the establishment to be increased by one Matron, Grade II, one Health Sister and six nursing sisters, but none of these new posts had been filled at the end of the year.

The Sarawak establishment includes provision for Brunei to the extent of two medical officers, one Matron, Grade II, one Nursing Sister and one Health Sister.

Even greater difficulties were experienced in recruiting local staff, especially nursing staff, and the number of recruits presenting themselves was quite insufficient to meet the needs of the growing department. The situation gave rise to considerable anxiety and various expedients were employed to meet the difficulties. A new grade of Assistant Nurse was created, for which a lower standard of education is required than for the probationer nurses as their training is purely practical and their function is to relieve the professional nurse of those ward duties which do not require for their performance

a high degree of professional training and skill. During the year this scheme proved its value and demonstrated conclusively that, far from being a temporary expedient, the Assistant Nurse is a permanent and essential part of the nursing service; and nurses are now employed in three of the Colony's hospitals. The shortage of nurses, also made it necessary to employ trained midwives to staff the Maternity Ward in Sibu Hospital.

Insufficient recruits to other branches, e.g. health visitors and health inspectors, prevented extension by these important and much needed services, and it was only in the midwifery services that as many trainees as could be dealt with were obtained, and a positive advance achieved.

Four hospital assistants and four nurses completed their training during the year and when the year closed thirty probationary hospital assistants and eighteen probationary nurses were in training.

The scheme for the improved training of midwives mentioned in the 1950 report was put into force in March. In the past midwife trainees merely received a year training in the Maternity Ward; the new scheme extends the period of training to two years and provides in addition instruction in ante-natal and post-natal care and experience of domiciliary midwifery. The domiciliary aspect of the scheme was, from March to October, under the supervision of the Midwife Tutor provided by UNICEF, and thereafter was supervised by her understudy, a local Senior Staff Nurse. By the end of the year satisfactory progress had been made and the scheme was securely launched.

Eight midwives were continuously in training throughout the year in Kuching. Two completed their training during 1951 and received certificates under the old training scheme.

It was unfortunately not possible to send any men to Singapore for training as health inspectors as the course leading to the examination for the Certificate of the Royal Sanitary Institute could not be held there. Towards the end of the year negotiations were proceeding with the World Health Organisation for scholarships to send one man to New Zealand for training as a health inspector and for a serving Senior Health Inspector to go to Australia to obtain experience in meat and food inspection and to obtain the appropriate certificate of the Royal Sanitary Institute.

Shortage of personnel again seriously hindered development of the health visitor service. When the year commenced the only two trained nurses and four district midwives were available and in training. During the year it was only possible to make one addition to this staff by the engagement of a further district midwife. The two trained nurses completed their health visitor's training and three of the district midwives having passed the appropriate examination will, in future, be designated assistant health visitors. Recruitment difficulties were extreme and it is anticipated owing to the increased period of training now required for midwives, from whom assistant health visitors are recruited that any improvement is unlikely during 1952.

Legislation.

During the year the most important pieces of public health legislation brought into force were the Port Health Regulations, 1951, and the Port Health (Air Navigation) Regulations, 1951, which replaced the former, inadequate, Quarantine Rules. These new rules incorporate the provisions of the current International Sanitary Conventions but they will, perhaps, require amendment when the International Sanitary Regulations enter into force.

Although a new Registration of Births and Deaths Ordinance was enacted in 1948 it was found in practice to place such a strain on the clerical staff of the District Administration that amendment of the registration system became necessary. To achieve this it was considered desirable to enact a new Ordinance and thus the Registration of Births and Deaths Ordinance, 1951, was placed on the statute book and came into force on 1st August, 1951. The new Ordinance while retaining the essentials of the previous system of collecting information, provides for the maintenance of a central register alone, in place of registers in each district.

New Buildings.

In spite of high building costs and labour shortages a not inconsiderable amount of Medical Department building was achieved or initiated during the year. At the Leper Settlement a new barrack block was erected and one semi-detached quarter. At Simanggang Hospital the erection of

a twenty-bed general ward and a small ward for infectious cases was commenced but the work had not been completed by the end of the year.

In Sibü various alterations and additions were made to the Lau King Howe Hospital. Internal alterations led to a small increase in bed accommodation, a mental ward was completed and also the new Nurses' Home. A twenty-bed ward for tuberculosis cases was under construction as the year closed. Although funds were provided for a new outpatient department the work unfortunately could not be started in 1951.

The largest medical scheme initiated during 1951 was the new Government Hospital at Miri and construction work had commenced by the end of the year. This scheme is the result of joint effort by Government and the Sarawak Oilfields Limited and provides for forty-four beds, twenty-two of which will be for tuberculosis cases. The cost of the tuberculosis unit and its equipment and the cost of part of certain ancillary hospital buildings will be borne by the Sarawak Oilfields Limited. The total cost of the scheme is estimated to be \$177,660 of which \$61,500 is accounted for by the hospital buildings and the remainder by staff housing.

Finance.

The expenditure on medical and health services in 1951 is provisionally estimated at \$2,043,317.86, as compared with \$1,469,285.52 in 1950.

GENERAL SANITATION.

Sewage Disposal.

There are no major schemes for the water-borne disposal of sewage. In the residential areas of Kuching, Sibü and Miri a few premises have septic tank installations, but general nightsoil disposal is by the double-bucket system. There is no doubt that this system will have to continue for many years, although septic tanks are installed in new buildings whenever practicable. In the villages and less congested areas, river or pit latrines are the rule.

Nightsoil disposal in Kuching is undertaken by the Municipality and the nightsoil is treated in a series of three septic tanks before discharge into the river below the town.

In Sibü and Miri the work is carried out by contractors and crude sewage is discharged into the rivers when the tide is ebbing.

Scavenging.

In Kuching collection and disposal of refuse is efficiently carried out by the Municipality, disposal being by controlled tipping in various areas where it is desired to reclaim land. In Sibü the organization has been greatly improved with the provision of mechanical transport similar to that used in Kuching. Elsewhere refuse removal services are operated with varying degrees of effectiveness; there was a general improvement during the year.

Water Supplies.

The main towns and several small townships have piped supplies collected from controlled catchment areas, but no treatment is undertaken except at Sibü. Here the supply is drawn from the heavily-polluted Rejang River and is treated by storage and chlorination. Elsewhere, rivers, wells and rain water storage meet the requirements of the population, but these sources are subject to contamination and are therefore a threat to the public health.

Food.

Food premises in towns operate under licence and are subject to inspection by public health staff when available. Though there has been a slight improvement in conditions, methods of manufacture, storage and preparation for sale remain in many cases primitive. Food hawkers present a major problem; their handling methods are crude and their numbers make control almost impossible; typhoid endemicity and the incidence of intestinal infections therefore remain considerable. The standard of the markets in the towns was reasonably good, as they were subject to departmental inspection and municipal control.

ENDEMIC AND OTHER DISEASES.

Tuberculosis.

The Chest Clinic service, initiated in Kuching late in 1950, developed rapidly and a considerable amount of work was accomplished in spite of staff difficulties resulting in a

period of stagnation for two months in the middle of the year. Public interest in, and response to, the service was very great and attendances at times threatened to overwhelm available resources. The following figures indicate the work carried out by the Clinic and also the magnitude of the tuberculosis problem in Kuching.

Total attendances	...	16,116
Total New Attendances	...	2,500
Total New T.B. Cases	...	637
Number Tuberculin Tested in Clinic	...	2,397
Negatives	...	401 or 17%
Positives	...	1996 or 83%
Number Tuberculin Tested in Schools	...	8,024
Negatives	...	5687 or 71%
Positives	...	2337 or 29%
Number given B.C.G. in Clinic	...	401
Number given B.C.G. in Schools	...	5,687
Number of X-ray films taken	...	1,426

Close liaison was maintained between the Clinic and the General Hospital which still has the only special tuberculosis beds, to the number of 50, in Sarawak. These beds were constantly full, generally with cases referred to the hospital from the Clinic. However, there were far more cases than beds and outpatient treatment with Streptomycin and P.A.S. was largely resorted to. Home conditions of patients were investigated and visits paid by health inspectors and health visitors. It was not, however, found possible with the staff available to undertake domiciliary treatment on any substantial scale.

There was financial provision during 1951 for additional tuberculosis beds at other hospital centres, namely, Simanggang, Sibuan and Miri, but, although construction was begun in each case, the badly needed additional beds were not yet available when the year closed. However, by mid-1952 the number of special tuberculosis beds available will be doubled.

Reference was made in the 1950 report to the possible formation of an anti-tuberculosis association to enlist voluntary aid. In April, the Anti-Tuberculosis Association of Sarawak was formed at a meeting in Kuching sponsored by the Social Welfare Council. The objects of the Association

are to aid and supplement by all practical means the efforts of the Government to combat the infection of tuberculosis throughout the Colony, and its efforts are at present directed towards three main objectives, namely, the provision of treatment centres, the provision of relief and health education. The Association was extremely active during the year and raised funds exceeding \$100,000. Its first aim is to erect in Kuching and present to Government a suitable building to accommodate the Chest Clinic Service. Plans were prepared but unfortunately owing to difficulties over the site, building operations had not commenced by the end of December. Nevertheless there is every prospect of the work starting early in 1952.

The activities of the Association did much to focus public attention on, and interest in the problem of tuberculosis and much useful health educative work was done.

In other urban centres the problem was, in proportion, as great as in Kuching but it was not possible to make any organised approach to it. In a remote area of the Colony namely the Fifth Division, a limited tuberculin survey was carried out in a rural tribal group, the Muruts, among whom tuberculosis was reported to be rife. The percentage of positives at 83% for all age groups was high for a rural population and arrangements are being made to initiate B.C.G. vaccination.

During the year the expected assistance from WHO/UNICEF to carry out tuberculosis survey work and B.C.G. vaccination did not, unfortunately, materialise although as the year closed the project had been approved and it was expected that the team of a doctor and a nurse might arrive early in 1952. This team will work for a year, nine months in Sarawak and three months in Brunei. The request made to the World Health Organisation for equipment for mass radiography and other equipment for the Chest Clinic was not approved, but arrangements have been made to provide these in 1952 from the Colony's funds.

Malaria.

Malaria incidence was unexceptional during the year. Few cases were recorded in the towns although hyperendemicity continued in the rural areas.

The Borneo Malaria Research Unit continued to be mainly preoccupied with work in North Borneo but it did carry out preliminary surveys in areas of the Fifth Division of Sarawak and in parts of Brunei. However, over the larger area of Sarawak the malaria map remains blank and the problems of the Sarawak vectors remain to be solved.

In 1949, *A. sundiacus* was apparently incriminated as a vector at Miri and this appeared to explain the coastal epidemics of malaria which had occurred from time to time in the past. However, during 1951 the Malaria Research Unit recorded nonviable bodies resembling sporozoites, but definitely not sporozoites, in the salivary glands of *A. sundiacus*. This casts considerable doubt on the findings at Miri in 1949 and thus the role of *A. sundiacus* in the transmission of malaria in Sarawak is again uncertain. A very great deal of investigation is required of this and other species of mosquitoes and it is hoped that more investigational work will be carried out in Sarawak in the near future. During 1951 application was made to the World Health Organisation for assistance in this regard, by the provision of an entomologist to carry out investigation and experimental control. The Organisation was prepared to assist and by the end of the year plans were sufficiently well advanced as to give rise to a real hope that the work would commence during the first quarter of 1952. Thus with the Malaria Research Unit in North Borneo and United Nations personnel working in Sarawak, the tempo of investigation should be materially increased.

During the year the total number of cases diagnosed as malaria at hospitals and dispensaries was 5,778, as compared with 6,689 cases in 1950, a very substantial reduction. As in the past the vast majority of these cases were diagnosed on clinical grounds.

Leprosy.

The number of cases admitted to the Leper Settlement during the year was 41 as compared with 66 in 1950, 59 in 1949 and 67 in 1948. The incidence of the disease does not, in consequence, appear to have changed to any great extent and certainly does not appear to have increased.

The Settlement population at the end of the year was 436 compared with 444 at the beginning of the year, the reduction, in spite of the year's admissions, being achieved very largely

by discharges of patients who had become bacteriologically negative as a result of treatment with the sulphone drugs. These during the year numbered 34. Each year since 1947 there has been a steady increase in the number of persons cared for in the Settlement with a consequent increase in the cost of operating the institution. For this reason alone a reduction in numbers is very welcome.

All persons discharged from the Settlement continued under oral D.D.S. treatment and had to report periodically for examination to the medical centre nearest to their homes. In the few instances of default those concerned were, as a disciplinary measure, returned to the Settlement. Several discharged cases found to have become bacteriologically positive once more were also returned to the Settlement. There is no doubt at all that the use of the sulphone drugs has led to an entirely different outlook on this disease, and persons admitted to the Settlement no longer feel that they are being subjected to a life sentence. However, problems are arising with regard to the re-absorption of discharged persons into the community and much education of the public at large is still required to enable the cured leper to be accepted with confidence by the people.

Poliomyelitis.

There was no epidemic outbreak during the year. Only six sporadic cases were recorded, one in Kuching, two in Sibul, one in Sibul Rural Area and two in other smaller centres in the Third Division. The last case occurred in August. All were paralytic cases and no deaths were reported.

Yaws.

This infection is met with all over the country and cases still frequently turn up at the hospital outpatient departments in the towns, the patients having come for treatment from nearby rural areas. However, there have been indications in the past two years that the incidence is declining and certainly fewer cases are being diagnosed now at outstation dispensaries and the travelling dispensaries than two years ago. There is at least a possibility that the decline may be due in part to treatment which is, in many areas, more readily available than it was in the past before the advent of the travelling dispen-

saries. During the year 11,930 cases were recorded at hospitals and dispensaries as compared with 7,592 cases in 1950 and 15,370 cases in 1949.

Diphtheria.

The incidence of this infection was not unusual in 1951. The number of cases recorded was 78 as compared with 46 cases in 1950 and 82 in 1949. Of the seventy-eight cases, sixty-two were recorded in Sibu.

The Enteric Fevers.

The number of typhoid cases notified was 70. The comparable figures for the three previous years were 76, 107 and 153 and thus the decline in incidence was maintained. No epidemic occurred and the cases occurred sporadically.

Dysentery and Diarrhoea.

Intestinal infections are very common in urban as well as rural areas, and dysentery and diarrhoea are diagnosed very frequently by hospital assistants in outstations. This is not surprising in view of the low sanitary standards of such a large proportion of the population. What is surprising, perhaps, is that no major epidemics occurred during the year.

Helminthiasis.

The proportion of the population harbouring intestinal parasites is very high. The commonest infestation is with the round worm, ascaris, but hookworm is also very common indeed, particularly in rural areas.

Venereal Diseases.

These diseases occur in all parts of the country but generally speaking the incidence is not unduly high even in the towns. During 1951, the number of cases of gonorrhoea diagnosed was 1,246, and of syphilis 1,357. The comparable figures for the previous year were 1,353 and 1,391.

Nevertheless these diseases are of great importance as was demonstrated early in the year by an investigation carried out in the Paku River of reported low fertility of the population. This investigation revealed a high sterility rate among the women and more than suggested that this was occasioned by venereal infection.

Deficiency Diseases and Malnutrition.

Gross malnutrition is uncommon in these days in Sarawak and deficiency diseases in severe form are not generally encountered. Admissions to Kuching and Sibü Hospitals classified as "Avitaminosis and other Deficiency States" numbered 66.

However, undernourishment in varying form is not uncommonly seen in infants at the Welfare Clinics and in older persons at the outpatient departments. Much of this is due to faulty customs and ignorance and, in such a prosperous period as the present, there can be little that is due to poverty. In certain areas of the country, although there is no accurate measure of the degree of malnutrition, it is known that, at certain times of the year, food supplies are deficient and the people go short while waiting for the new harvest.

Non-endemic Diseases.

No case of the major pestilences, plague, smallpox and typhus, occurred during 1951. Typhus has never been recorded in Sarawak and it is considerably more than twenty years since cholera or plague occurred. Smallpox occurs in neighbouring territories and, on one occasion, early in the year, action was called for following reports of the infection in longhouses in Indonesian territory close to Sarawak's frontier. Widespread vaccination was carried out and no cases appeared in this territory.

HOSPITALS, DISPENSARIES AND OTHER INSTITUTIONS CONCERNED WITH THE PUBLIC HEALTH.

As in the previous year Government operated three hospitals, twenty-four outstation dispensaries and seventeen travelling dispensaries, sixteen of which were river craft and one a road vehicle. Most outstation dispensaries have rest beds and simple inpatient treatment is provided. The total number of Government hospital beds in use during the year was 356, namely, 395 (including 100 mental beds) in Kuching General Hospital, 117 in the Lau King Howe Hospital, Sibü and 24 in Simanggang Hospital.

At Miri, the Sarawak Oilfields Limited operates its hospital of 124 beds primarily for its employees but by arrangement with the Company its hospital facilities are

made available to the public on repayment by Government. A similar arrangement with the Government of Brunei enables people of the Fifth Division to receive treatment in Brunei Hospital.

General Hospital, Kuching.

This is the largest and most elaborate medical institution in the Colony and it finished the year with 295 general and special beds and 100 mental beds. It is the training centre for hospital assistants, nurses, midwives, etc.

Staff difficulties have already been referred to and these prevented the full bed accommodation in the hospital being brought into use. The ward which had to be closed down last year remained out of use and, at one period of the year another ward was virtually closed down. This was only temporary, however, and, with the employment of additional assistant nurses it was brought into full operation again.

No major capital works were carried out in the General Hospital during the year but there were further minor improvements such as the provision of a very adequate practical teaching room. There was further steady improvement in equipment and the replacement of old equipment has now been practically completed. The main operating theatre and the x-ray department were air-conditioned with great benefit to staff working in these rooms.

The *Mental Hospital* is situated in the same compound as the General Hospital, Kuching, and accommodation is neither sufficient nor of a satisfactory nature. Throughout the year there was some overcrowding which increased the difficulties of caring for these patients in inadequate buildings. As much as was possible in the circumstances was done but it cannot be claimed that a high standard of treatment was achieved or that the institution was much more than a place of restraint. It was necessary during the year to carry out extensive repairs to buildings and to provide more secure accommodation for certain violent and dangerous patients. But all this is merely a temporary expedient and no final answer to the problem. It was thus gratifying that considerable progress was made in the planning of the proposed new mental hospital to be erected in Brunei to serve the three

British Borneo Territories. A site has now been agreed upon and plans of the institution have been prepared and accepted by the three Governments.

The Laboratory, also sited in the compound of the General Hospital, Kuching, as usual functioned in a very satisfactory manner and there was steady improvement in equipment. Work was carried out not only for the Medical Department but also for the Customs and Agricultural Departments and specimens were even received from the Medical Department of North Borneo. The potential of this institution is considerable and its development will be more rapid when it will eventually be possible to post to it a full time medical officer.

During the year the number of inpatients treated in the General Hospital was 5,271 as compared with 5,064 in the previous year.

Central Dispensary, Kuching.

This is the Outpatient Department of the General Hospital although sited in the centre of the town one and a half miles distant from the hospital. It is accommodated in two separate buildings and shares the available space with the central Maternity and Child Welfare Centre, and the Chest Clinic. The accommodation is sufficient for the outpatient department alone and totally inadequate for the additional activities mentioned. Staff and public are greatly inconvenienced by the inevitable overcrowding and work is carried out under real difficulties. It is quite the most unsatisfactory medical institution in Kuching and its replacement by a suitable new building is a matter of great urgency. During the year plans were prepared for a new building to provide adequate accommodation for the male and female outpatient departments, the Maternity and Child Welfare service, the dental service, a laboratory and a pharmacy. The scheme received the approval of Government and appropriate provision was made in the 1952 Estimates. The new building will be erected on a site adjoining that upon which the Anti-Tuberculosis Association of Sarawak will erect the building to accommodate the Chest Clinic Service, so that laboratory and other services can be shared.

Total outpatient attendances at the Central Dispensary during the year was 92,813 as compared with 73,506 in 1950.

*Maternal and Child Welfare Service.**(a) Welfare Clinics.*

As in the previous year three centres were in operation, two in Kuching and one in a rural area fifteen miles from Kuching. These were supervised by the Lady Medical Officer, who also had duties in the General Hospital, and by a Health Sister. The latter was on overseas leave during the year but, fortunately, during her absence the WHO/UNICEF sister in charge of the Domiciliary Midwifery Service, was able to carry out her duties.

The service continued to be very popular and there was a substantial increase in the number of attendances. The work was, however, seriously hampered by shortage of locally recruited staff and until these can be obtained there is no possibility of expanding the service either in Kuching or in other centres, such as Sibul and Miri, where it is greatly needed. Inadequate and unsuitable accommodation also hindered the work of the central clinic in Kuching.

The main centre in the Central Dispensary caters mainly for the Chinese, the Kampong Clinic exclusively for the Malays and the 15th Mile Clinic almost exclusively for the Land Dayaks. Attendances at all three centres showed a material increase over those of the previous year. Figures of attendances are shown below.

		<i>Main Centre</i>	<i>Kampong Centre</i>	<i>15th Mile Centre</i>
<i>Infants</i>				
Total attendances	...	6002	614	2051
Total number of home Visits	...	3377	—	—
<i>Ante-natal Cases</i>				
Total attendances	...	6847	346	629
Visited at home	...	994	—	—
<i>Post-natal Cases</i>				
Total attendances	...	1060	56	148

The figure for home visits includes the Main Centre and the Kampong Centre. A number of Land Dayak compounds were visited from the 15th Mile Centre.

(b) Domiciliary Midwifery Service, Kuching.

Reference was made in the previous report to a proposal to start domiciliary midwifery service in Kuching with the

object of relieving pressure on the limited number of obstetric beds in the General Hospital and also to provide improved facilities for the training of midwives. The scheme was initiated in March and was under the care of the WHO/UNICEF Midwifery Tutor whose term of service was extended by a year to enable her to establish the service on sound lines. In the event, this lady resigned in October to get married but by then the service was operating smoothly and the local staff nurse who understudied the Midwife Tutor was fully capable of carrying on on her own. The service was staffed initially by the Staff Nurse, three trained midwives and one pupil midwife, the intention being as time went on to increase the number of pupil midwives. However, when the year closed it had not been found possible to increase staff and two trained midwives and two pupils were engaged on the work.

Cases suitable for home delivery are selected through the ante-natal clinics and are visited in their homes before the birth. The staff is on call through the twenty-four hours at the General Hospital and proceeds to the homes by bicycle. After delivery visits continue for ten days when the case is then handed over to the health visitor concerned.

During the nine months of its operation, 388 home deliveries were carried out by the service which is now firmly established and greatly appreciated by the public. A pleasing feature is the increasing use made of the service by the Malays, who are very reluctant to seek hospital treatment.

The Dental Clinic, Kuching.

Dental staff remained unchanged from the previous year. It consists of one Dental Officer, one Dentist on contract, a dental mechanic and one hospital mandor. This team has its headquarters at present in the General Hospital, Kuching, but will, next year, be moved to the new Health Centre to be built in the centre of the town. Two fully equipped dental surgeries are available and also a dental laboratory.

The service provided was much appreciated and made full use of particularly by Government officers and their families. Treatment was also provided for hospital inpatients and outpatients, patients referred from the Maternity and Child Welfare centres, and also school children. Visits paid by

dental staff to outstations at intervals throughout the year were extremely popular and much good work was done.

In September a local Chinese girl was granted a Scholarship by the New Zealand Government under the Colombo Plan to go to Wellington for the two years' training for Dental Nurses. On her return she will be of great use to the Department in providing dental services to school children.

Lau King Howe Hospital, Sibü.

This busy hospital which serves the largest administrative division, had available throughout the year only one medical officer, and also was without a Nursing Sister. A Senior Staff Nurse acted as Nursing Sister and did very well, but there was not as much progress in the raising of standards of nursing and ward management as one would have wished for. This shortage of senior staff was a serious matter for it threw a considerable strain on available personnel and completely precluded visits by a medical officer to outstations in the Division.

A certain amount of building was achieved and internal reorganisation effected. With the completion of the mental observation ward referred to in last year's report, the old mental cells in the main hospital building were gutted and converted into a small, but useful, children's ward. A new Nurses' Home was erected during the year and this will be occupied in January, 1952. Also work on a tuberculosis ward had commenced by the end of the year. But, as in Kuching, the greatest need of the Sibü Hospital is for a new and adequate outpatient department to be provided to replace the completely unsatisfactory temporary structure which at present is in use. Although funds were provided for this work it could not, unfortunately, be undertaken in 1951.

The old X-ray plant in the hospital broke down and was not considered worth repairing. To tide over the period until a new set could be ordered and delivered a portable apparatus was purchased in Singapore and installed in the Sibü Hospital. It gave very good service indeed and did all that was asked of it.

There was a slight fall in the number of inpatients treated as compared with the previous year. The 1951 figure was

2,929 as compared with 3,064 for the previous year. Out-patient attendances, however, showed a satisfactory increase, total attendance being 28,379 as compared with 24,292 in 1950.

Confinements conducted in the hospital number 341 as compared with 265 in the previous year.

Simanggang Hospital.

The performance of this institution with twenty-four beds available throughout the year was very satisfactory. Admissions numbered 591, a slight reduction on the previous year's figure of 698. Here again, however, outpatient attendances showed an upward trend. Total attendances numbered 23,090 and new cases 18,811. The corresponding figures for the previous year were 19,075 and 15,722.

It had been planned to provide during the year a new general ward of twenty beds, a small ward for infectious cases and a mortuary, but because of building difficulties none of these buildings were completed when the year closed although the two wards were under construction and should be completed early in 1952. It is planned gradually to increase the bed strength of this hospital to seventy.

Outstation Dispensaries.

The number of outstation dispensaries functioning during the year was twenty-four, the same as in the previous year. One additional dispensary was established in a very remote part of the country, in the upper reaches of the Trusan River, to serve the Muruts, a population group much in need of medical care. It was not, however, found possible permanently to man this dispensary and visits at two monthly intervals by a hospital assistant had to suffice. Limited dispensary facilities were also made available to the small population in the remote Kelabit plateau.

Total attendances at these dispensaries were 120,705, slightly greater than in the previous year in spite of the fact that throughout the year, for the first time, nominal charges were levied in the case of persons who could afford to pay.

Once again supervision of the work of the hospital assistants in these dispensaries was completely inadequate, as such medical staff as was available was tied to the hospitals

and was unable to travel in the Divisions. In spite of this, however, there were few instances indeed where unfavourable reports were received and there is no doubt that, unsupervised as they were, the hospital assistants gave good service to the public.

The Travelling Dispensaries.

(Colonial Development and Welfare Scheme No. D.850.)

The travelling dispensaries are native type boats (Perahu) suitably adapted and powered by outboard motors. They ply on fixed stretches of river, calling at convenient points on fixed days each week. They are manned by a hospital assistant, an attendant and a driver. Simple curative services are provided at each calling station and, in addition, the boats function as river ambulances bringing back to outstation dispensary or hospital those who require more elaborate treatment than can be provided from the travelling dispensary. There are sixteen of these units and they cover a very large area of the Colony's river system that was never, in the past, visited by medical staff.

On the whole these sixteen units operated satisfactorily throughout the year though the service was by no means free from trouble. In certain stations where facilities for engine maintenance were not good, engine troubles occurred, and with greater frequency as the year progressed. Interruptions to schedules were occasioned by this and in certain instances much travelling time was lost. It has become clear that the successful continuance of this service, is dependent on the organisation of facilities to service and maintain the engines. It now seems probable that the high speed outboard engines are not entirely suited to the hard and continuous work entailed and thus, in anticipation of major capital replacement being necessary when the present Colonial Development and Welfare Scheme ceases at the end of 1952, arrangements were made towards the end of the year for an experiment with an inboard Diesel engine. Although the initial cost of this type of inboard engine is greater than that of the outboards, running costs will be very much lower, maintenance will be simpler and, it is hoped, reliability greater. Should this experimental unit prove a success a change to these inboard engines will be made, in most cases, when the present scheme terminates. Some high powered outboards will, however, continue to be necessary in the upper reaches of certain fast flowing rivers.

Total attendances at the travelling dispensaries fell from 164,778 in 1950 to 112,380 in 1951, a drop of about 30%. This serious falling off of attendances can certainly, in part, be attributed to interrupted schedules but this is not the whole explanation. In the Dayak areas there is little doubt that with the wearing off of the novelty of the service there is less interest and only the sick now attend whereas before the sick and the curious sampled the new and readily accessible medicines. Nevertheless, certain District Officers on being asked to express opinion on the causes of the falling off of attendances have attributed it, in part, to a definite improvement in health.

The Leper Settlement.

This institution is situated thirteen miles from Kuching and is accessible by motor road.

The population of the Settlement at the end of the year was 436, six persons fewer than at 31st December, 1950, in spite of there having been 41 admissions during the year. The steadily increasing population of the Settlement over the past few years had given cause for some concern as costs of operating the institution materially increased and accounted for a substantial proportion of the Medical Department's budget. Thus even the slight reduction achieved in 1951 is welcome indeed, and in the light of modern treatment augers well for the future. Discharges from the Settlement during the year numbered thirty-four, considerably more than in any previous year; there were eleven deaths. Births in the Settlement numbered six. Practice is for confinements to be conducted in the Settlement hospital by a trained midwife from Kuching. Children are taken to the General Hospital and cared for there until it is old enough to be adopted.

The racial and sex distribution of the 436 inmates at 31st December was as follows:—

<i>Race.</i>	<i>Male.</i>	<i>Female.</i>	<i>Total.</i>
Chinese	... 139	34	173
Malays (including Melanaus)	... 43	18	61
Dayaks	.. 145	57	202
	<hr/> 327	<hr/> 109	<hr/> 436

During the year, as the first stage of a building replacement scheme, one barrack block and one block of semi-detached quarters were erected. In addition the water supply was greatly improved by the installation of a new pumping engine and the replacement of much of the piping.

The various voluntary organisations, such as the Red Cross, Rotary and the Chinese Associations continued to interest themselves in Settlement affairs and did much to bring colour and interest to the lives of the inmates.

PORT HEALTH ADMINISTRATION.

Three ports, namely, Kuching, Sarikei (for Sibu) and Miri are first ports of call for vessels from overseas. At each of these ports formalities are conducted by health inspectors but medical officers are available to deal with abnormal situations.

Kuching Airport remained the only airport at which aircraft from overseas make a first landing. The Airport is a designated sanitary aerodrome and a local area.

No infected vessels or aircraft entered during 1951.

VOLUNTARY AGENCIES CONCERNED WITH THE PUBLIC HEALTH.

British Red Cross Society—Sarawak Branch.

During the year the Branch continued its activities in Kuching, Miri and Betong. The ambulance service did excellent work in Kuching and the First Division until September when the vehicle was involved in an accident and was a total loss. No replacement had been obtained by the end of the year.

Welfare work in the General Hospital, Kuching, the Mental Hospital and the Leper Settlement was carried out as in the past. Courses of lectures in First Aid and Nursing were held. The blood transfusion service was again of great assistance to the Medical Department and met all the demands placed upon it.

Sibu Benevolent Society.

This voluntary body is the longest established and, perhaps, the most active in the country. Its headquarters are in Sibu but, by its constitution, it serves the whole of the Third Division. Of its activities, the most important are the

provision of care for destitute aged persons and also chronic tuberculosis cases. A Home near Sibu caters for the former category, while the tuberculosis cases are cared for in a Nursing Home in Sibu itself. The nursing home buildings were very dilapidated and unsuitable and thus new premises were provided during the year. The Society provided the land and Government met the cost of erecting a new building.

The Society is supported mainly by public subscription but it also receives a monthly contribution from Government.

Missions.

During the year there was some increase in the medical activities of certain of the missions, their staff being augmented, in one case by a doctor, and in another, by a trained nurse and a public health nurse. Simple out-patient treatment continued to be provided at several mission stations and, at two, inpatients were cared for by nuns who are also qualified nurses.

(C) SOCIAL WELFARE.

Though Sarawak has no Social Welfare Department as such, the Government does in fact perform a considerable amount of social welfare work. Government charity votes for the relief of the needy are operated throughout the Colony by Administrative Officers. The Secretary for Chinese Affairs, in addition to his other duties, acts as Protector of Women and Girls, administers a repatriation vote and as Protector of Labour administers a Relief Work vote for Indians. His activities are not confined to the Chinese community, but extend to all non-indigenous communities. Charitable relief to needy Mohammedans is provided from a trust fund. The Government has also for many years maintained a Pauper Settlement, now known as the Home for the Aged.

Since the formation of a Social Welfare Advisory Committee in 1948, good work has been done in advising the Government on social welfare policy and practice. During the past years a Social Welfare Council, which was established, comprising representatives of all the various organisations which are interested in this kind of work, has been functioning well.

Most of the races in the interior of Sarawak lead a community life; the individual, incapacitated by illness or accident,

cannot be ignored or abandoned, and there is, in consequence, little or no destitution among these people. They rarely fail to provide foster-parents for orphans and succor for the needy in their midst. This does not mean that their standard of living is anything but low, and relief has frequently to be supplied by the Government in the event of a failure of the rice harvest.

There is a certain amount of destitution among the Chinese. The various Chinese communities have their own associations, which themselves, or with the help of Government, effect some relief within their own communities. Aged destitute males are taken into the Home for the Aged near Kuching. In Sibu, thanks to the efforts of a committee consisting of members of all communities, a Benevolent Society was established to which reference has been made above. This Society, aided by a grant from Government and considerable assistance with nursing staff and supervision from the Roman Catholic Mission, runs its own nursing home for the indigent and is doing excellent work. The Mission Churches and Convents care for a limited number of orphans, run small hospitals and nurseries in certain outstations, and are active in improving social conditions generally, while clubs, societies and youth organisations, such as the Boy Scouts and Girl Guides, exercise a healthy influence beyond their own circles.

Juvenile delinquency exists in the principal towns; in Kuching the Boys' Home, opened in 1948, met with a setback during the year but it is hoped that the reorganisation effected under the direction of the Superintendent of Prisons, will enable it to continue its good work of turning potential young criminals into useful citizens.

The Boys' Club and Hostel established in August, 1949, has continued its good work in solving some of the major problems confronting homeless youths. This Club, on the lower floor of the building, is open from noon till 8.15 p.m., and provides a radio set, pingpong tables and newspapers; outside these periods football, basket-ball and volley-ball are organised for the boys on a nearby recreation ground. The Hostel on the upper floor can accommodate up to twelve boys and is intended to provide a temporary home for youths between the ages of 14 to 20. The Warden and the Board of Management help the boys to find suitable employment.

The Girls' Home established in 1950 continued under the management of the Salvation Army. This Home is used as a place of safety under the Protection of Women and Girls Ordinance and the categories of girls who could be placed there are : mui tsais, girls who have been trafficked in, girls in need of protection whose guardians cannot be found and girls who have been victims of immoral offences and girls in moral danger, but in no case over the age of 18 years. Aged destitute females are taken in the Home and given assistance pending the organisation of a Home for the Aged (Females). The official opening ceremony of the Girls' Home took place on 15th November, 1951, to which His Excellency the Governor and many other prominent persons were invited. Two Officers from the Singapore Salvation Army are in charge and they work in close co-operation with the Protector of Women and Girls and the Lady Assistant Protector, who returned from Singapore in July, 1951, after a course of training in the Department of Social Welfare, Singapore, as a scholar under the UNICEF Scheme.

IX

Co-operative Development.

1951 was the third year of the Department's Five-Year Plan of Co-operative Development. The Plan remained unchanged but the Department was unable to complete the 1951 programme. Whereas in 1950, 39 Societies were added to the Register, only 18 were added during 1951. Requests to form Societies came from most Districts in Sarawak but very few could be accepted, and only in those Districts where Supervisors are stationed. Field officers were fully occupied supervising registered Societies and had little time to spare organising new ones. Thus, planned development and consolidation was once again confined to the few selected areas within the capacity of the Department—the Kuching and Serian Districts of the First Division, the Saribas and Kalaka Districts of the Second Division, and the Oya-Dalat and Mukah Districts of the Third Division.

The work done fell short of the Five-Year Plan as follows :—

(a) for lack of tutors (planned to be drawn from experienced field staff), the establishment of a Co-operative Staff School was postponed and training of staff and office-bearers of Societies was curtailed;

(b) expansion into the Simanggang and Lubok Antu Districts of the Second Division and into all Districts of the Third Division could not be attempted because of lack of staff;

(c) all work among Chinese peasants of the First Division came to a standstill, because of the resignation of one of two trained Chinese Supervisors;

(d) no progress could be made towards forming Farming Societies (although there were several applications) because land tenure problems invariably confused the issue;

(e) the Department had budgetted for 18 Field Officers in 1951; in fact it had only 13 at the end of the year.

Three Societies failed and orders for cancellation of two of these became effective before the end of the year. Thus the total number on the Register at the end of 1951 was 79.

For the Co-operative Officer, travelling in Sarawak in the Sea Dayak areas (where most Co-operative Development goes on) is arduous. It means unpleasant voyages in slow uncomfortable trading launches, an occasional trip in an outboard-propelled boat, being paddled or poled in small uncovered boats up and down streams subject to the wide variations of tropical weather, and walking over rough tracks through swamp or over hilly country. Equipment must be reduced to a minimum. Most work must be done at night in long-houses among the noise and turmoil of friendly human beings of all ages and, not infrequently, of animals. Therefore, after a few months of this weary travelling, reaction invariably sets in and the officer becomes discouraged, his enthusiasm evaporates and the quality of his work deteriorates. Sickiness also takes its toll. Thus the quality of the field work done in 1951 was below that of 1950 in spite of the extra experience gained. Refresher courses at Headquarters for officers constantly travelling should have a beneficial effect, and it is hoped to arrange these in 1952.

To a great extent expansion depends upon the time the European official can devote to it. This is particularly true in the Sea Dayak areas where the presence of the European is desired at any meeting convened to make a decision of importance; it follows, then, that if the European devotes less time to travelling then less development takes place, and so in 1951, with only one Senior Officer on duty for the greater part of the year, only 18 Societies were registered, as against 39 in 1950 when two Senior Officers were employed between field and office.

Lest this review should appear too gloomy, it is stressed that Co-operative Development is still progressing with vigour wherever the Department operates. There *was* progress in 1951, but not as much as was wanted or planned. Back sliding on the part of a few Societies was detected, but this is a normal feature in Co-operation; after two or three years of work it is to be expected that weaknesses will appear, and in the long run the best remedy is to eliminate the worst offenders. Particularly is this true in the Sea Dayak areas

where the fear of shame from failure can be a very effective spur towards progress.

No organised opposition to Co-operation was recorded and it can now be stated with certainty that among the Malay community suspicion has been replaced by appreciation. The Chinese merchants remain suspicious and sceptical although a few of the more liberal-minded freely and publicly admit the virtues of the movement; most of the opposition from individuals comes from ignorance of the true objects of Co-operation. The unprecedented rise in the market value of agricultural produce, accompanied by soaring prices for all consumer goods, brought about abnormal situations sometimes favourable, sometimes unfavourable, to Co-operation.

Urban Co-operatives.

The three Thrift and Loan Societies were not spectacular in their progress but another year of experience left them more firmly entrenched, financially sound and stronger.

The Kuching Co-operative Stores Society, Limited, which came into being early in the year and commenced business in May, had a marked effect upon prices in the town. The wild fluctuations in the retail prices of essential commodities began to disappear and the Society's prices began to be accepted as the market prices of goods, whether the latter were in short demand or not. Memories are short, and it is doubtful if the good work done for salaried people in Kuching is fully realised, but the Society can look back with pride upon eight months of real service to all consumers.

A Co-operative Store belonging to the Constabulary operated on behalf of members of the Force in Kuching. It suffered a setback late in the year, but after re-organisation took new life. It is hoped to form a similar Co-operative in Sibu in 1952.

Rural Co-operatives.

The Rural Credit Societies increased their deposits from \$7,820 to \$17,881 and at the same time retailed goods worth \$20,250 realising a net profit of \$1,469. The policy of including powers for the bulk purchase and distribution of a few commodities in the by-laws of these Societies has now been proved a sensible one. All Societies indulging in this business made a profit, much to the satisfaction of members,

many of whom (as in the case of the Malays and Melanaus) see no point in saving unless it brings immediate and tangible proof of benefits.

Not all the Co-operative Stores were successful and two suffered comparatively heavy losses through their own un-business-like behaviour. Probably these two will be closed down in 1952 to serve as an example to others of how not to run a business. But in general the 13 rural stores provided a valuable service, and some of them are really good. Usually their greatest problem was that of wholesale purchase; being comparative newcomers in the field of trading they suffered when attempting to purchase goods in short supply and a certain amount of discrimination against them by wholesalers did not make their lot any the easier. But if this has done nothing else it has made them aware of the need for greater strength and good relations in business. Through the experience of these Societies of to-day will come the realisation of the need of a Co-operative Wholesale Society, and one group of four Sea Dayak Co-operatives is now making the first step in that direction by forming a Union to undertake purchase and distribution in bulk to its member Societies.

The 19 Savings Societies held deposits totalling \$40,632 at the end of the year—an increase of \$14,983 in one year. All of them showed a profit.

Although Padi Milling Societies increased in number from 4 to 6 only, the activity in development of this type was really greater and will be felt in 1952 when the number should on present indications increase to about 15. The padi mill in the Sea Dayak village is playing a big part in Co-operative education. It relieves the labour of the women, it demonstrates visually the achievement of the group and gives the members pride, it demonstrates the need for loyalty in Co-operation, by its simple administration patronage bonus is easy to understand, the benefits of cash for work done are clear, and these small experiments in business in which most of the capital is sunk in a small compact machine provide valuable preliminary training for more diverse projects.

Miscellaneous Co-operatives.

The Kuching Henghua Fishermen recorded further progress towards forming their own village, and the roads and many of the houses should be built in 1952.

The Hostel Society lay dormant because of the soaring cost of construction which precluded any attempt to build the Hostel.

The Farming Co-operative is also dormant—all the members were attracted away by high wages offered elsewhere. No progress can be expected until values become more rational. On the other hand, the Sungei Paku Farming Co-operative planting padi made good progress and an excellent crop is expected.

General Observations.

Once again it was not possible fully to exploit the high prices of agricultural produce even in the areas in which the Department operated, although most Societies saving money showed substantial increases in their members' deposits. Requests for such Societies continue, but to form and register them, and then leave them without supervision because of lack of trained supervisory staff would be disastrous, and so such Societies appeared only in the areas already being developed.

Once again, also, no Marketing Societies were registered, and none can be expected until the values of primary products fall to the point where the margin between the sale price by individual producers to middlemen and the sale price by bulk becomes of interest and importance to the producer.

Now that the prices of primary products appear to be taking a definite downward trend it may be permissible to take stock to see if Co-operation has been of any material assistance to the primary producer of Sarawak. There can be no doubt that wherever the producer is a member of a Society he has benefited through Co-operation. As a member of a Rural Credit Society he has savings to his credit in the Society, probably short-term loans are available, and he has benefited by the purchase of goods at reasonable prices through his Society's bulk purchasing organisation; if he is a member of a Savings (money) Society he has funds in deposits for his future use; if he belongs to a Padi Savings Society he is assured of a reserve of food and probably has deposits of money standing to his credit in the Society's books, derived from the bulk sale of padi stocks; if he is a member of a Padi Milling Society he has obtained a service which has released his women-folk for work in the fields with him, he holds valuable

milling done at cost price to the Society since it has always been policy in these Societies to aim at recovery of capital outlay in three years; if he is a member of a rural Co-operative Store he has obtained a service previously denied him and has saved money, and the capital value of his store remains in his village; and the members of the one and only Padi Farming Society are now firmly established on good farming land for the first time. Wherever a Co-operative has been established the members are better off materially and have something put aside for the future. But there is no gainsaying the fact that the total number of members of such Societies is as yet only a minute proportion of the rural population of Sarawak, and, therefore, Co-operation has not yet conferred much benefit upon the people as a whole.

The following table shows the type and number of Co-operative Societies registered at the end of 1951 :—

(a) Thrift and Credit Societies of unlimited liability (known as Rural Credit Societies) ...	25
(b) Thrift and Credit Societies of unlimited liability accepting padi (and not money) deposits ...	3
(c) Thrift and Credit Societies of limited liability (known as Urban Thrift and Loan Societies) ...	3
(d) Thrift and Credit Societies of limited liability saving padi only ...	2
(e) Thrift Societies of limited liability (known as Rural Savings Societies) ...	19
(f) Consumer Societies (known as Stores Societies, 13 rural, 2 urban) ...	15
(g) Producers' Processing Societies (5 padi mills and 1 padi mill and electric lighting plant combined) ...	6
(h) Hostel Society (a Secondary Society formed by Saribas Co-operatives) ...	1
(i) Other Societies (a Chinese Society of fishermen pledged to form a model village, a Chinese Sea Transport Society, one Chinese and one Sea Dayak Farming Society, and a Malay Cattle Farming Society) ...	5
Total ...	<u>79</u>

X

Legislation.

During the year the legislature has continued to observe the two cardinal principles already generally apparent in the post-war legislation of the Colony: in existing law, amendment and consolidation; in new law, enactment of legislation dealing with social and economic development and welfare. Out of the twenty-seven Ordinances enacted during the year no less than sixteen were amending Ordinances; one Ordinance, the *Registration of Births and Deaths Ordinance*, reformed and consolidated an earlier Ordinance of 1948, which experience had proved difficult of administration; and another Ordinance, the *Labour Ordinance*, whilst also providing a comprehensive code designed to regulate relations between workers and their employers, will when it comes into force repeal the existing Labour Protection and Labour Conventions Ordinances, and effectively amend and consolidate the law relating to labour.

Another principle is, however, to be detected in the year's legislation. With the enactment of the *Currency Ordinance*, which came into force on January 1, 1952, Sarawak came within the framework of the Malaya-British Borneo Currency Agreement, which established a Currency Commission for the Federation of Malaya, the Colonies of Singapore, Sarawak and North Borneo, and the State of Brunei. Under this Ordinance Sarawak will enjoy a common currency with its nearest commercial neighbours, an arrangement likely to lead to the withdrawal and demonetisation of Sarawak currency, but one of considerable convenience to travellers and merchants. The principle of integrating the affairs of Sarawak with those of its neighbours, upon which that Ordinance is based, also found expression during the year in the promulgation of the *Sarawak, North Borneo and Brunei (Courts) Order in Council*, which came into operation on December 1, 1951, and established for the Colonies of Sarawak and North Borneo and the State of Brunei one Supreme Court of Judicature, consisting of a High Court and a Court of Appeal.

As a result of the Order in Council certain local legislation became necessary: the *Courts Ordinance* amended and consolidated the law relating to the constitution and powers of civil and criminal courts (other than native courts) and repealed the former Courts Ordinance (Chapter 3 in the Revised Edition of the Laws), the Circuit Courts Ordinance, 1947, and the Rule Committee Ordinance, 1949; the *Native Courts (Amendment) Ordinance* made consequential amendments to the Native Courts Ordinance (Chapter 4 in the Revised Edition of the Laws); and the *Criminal Procedure Code (Amendment) Ordinance* made a comprehensive revision of the Criminal Procedure Code (Chapter 62 in the Revised Edition of the Laws). These three Ordinances are to come into force on May 1st, 1952, when magistrates, police officers and others will have had sufficient time to familiarize themselves with their various provisions..

Among the Ordinances enacted during the year and not mentioned above the following are of interest—

The *Native Customary Laws Ordinance*, designed to provide for the variation of the customary law of any native race in the Colony. The customary laws of certain native races were from time to time prior to the coming into force in 1941 of the Constitution Ordinance reduced to writing. With the coming into force of the latter Ordinance, however, it became necessary, if the natural development and evolution of native customary law was not to be frustrated, to have legislative sanction to effect any further alterations or amendments. The Ordinance provides the necessary legal machinery to achieve this object. The Ordinance which consists of four short sections, is therefore of interest not only to natives of the Colony, but also to those jurists interested in law in the making.

The *Governor's Powers (Delegation) Ordinance* and the *Governor in Council's Powers (Delegation) Ordinance* enable certain statutory powers of the Governor and the Governor in Council to be delegated. Until the enactment of these two Ordinances local law contained no provision for delegation, a power desirable in view of the burden imposed upon both the Governor and the Governor in Council by an increasing number of Ordinances.

The *Consular Conventions Ordinance*, which made provision for conferring certain powers and privileges upon the consular officers of foreign States with which consular conventions are concluded by Her Majesty.

The *Boy Scouts Association Ordinance*, which follows similar legislation in force in neighbouring territories and extends a statutory protection to the uniform, badges and emblems of the Boy Scouts and Girl Guides Associations in the Colony.

The *Rent Control (Amendment) Ordinance*, which amended the Rent Control Ordinance, 1948, in certain important respects, for example by enabling a landlord to increase the rent of his principal tenant, upon certain conditions, on an increase in the rateable value of the premises let, and also by affording protection to the widow of a statutory tenant under the Ordinance.

Subsidiary legislation promulgated during the year has included regulations made under the Constabulary Ordinance, 1948, and providing for the payment of good conduct allowances to certain members of the Sarawak Constabulary; an order made under the Cattle (Control) Ordinance, 1950, forbidding the slaughter or export from the Colony of cows and female buffaloes, except under licence; the first by-laws dealing with local education to be made by a Local Authority under the Local Authority Ordinance, 1948; a variation in estate duty levied under the Estate Duty Ordinance, permitting certain relief from duty in cases of "quick succession", on the lines of that conceded in the United Kingdom; new rules under the Land and Land Settlement Ordinances; regulations made by virtue of the *Local Authority (Amendment) Ordinance*, (enacted during the year) and making detailed provision for the levy of rates by certain Local Authorities; comprehensive Port Health Regulations and Port Health (Air Navigation) Regulations, promulgated under the Prevention of Disease Ordinance; and rules made under the *Registration of Births and Deaths Ordinance*, 1951, and prescribing certain forms in English, romanised Malay, Jawi and Chinese.

Throughout the year there has been an increasing interest on the part of Local Authorities in subsidiary legislation designed to augment local revenue. It seems clear that the merits of the Local Authority Ordinance of 1948 are at last

beginning to be appreciated by those authorities for whom it was designed; in Sibü, for example, the former Municipal Board working under the Municipal Ordinance of 1933 has been replaced by the Sibü Urban District Council, a Local Authority working under the Ordinance of 1948. Such progress in the growth of local civic consciousness represents a major development in the legal history of local government in the Colony, and the task of advising and drafting legislation for those Local Authorities anxious to fulfil their civic responsibilities is likely to become more arduous as they continue to advance along the road to autonomy.

XI

Law and Order.

(A) JUSTICE.

Apart from Imperial legislation, whether by Order in Council or otherwise, the law of Sarawak is to be found mainly in local Ordinances and native customary law. Chinese customary law, chiefly in matrimonial matters and in relation to inheritance is recognized to a limited extent, but only insofar as such recognition is expressly or by implication to be found in a local Ordinance.

Where Sarawak law is silent, the Courts apply the common law of England and the doctrines of equity, together with English statutes to the extent permitted by the Application of Law Ordinance, 1949. But English law is applied so far only as the circumstances of the Colony and of its qualifications as local circumstances and native customs render necessary.

On the 1st December, 1951, the Sarawak, North Borneo and Brunei (Courts) Order in Council, 1951, came into force. This Order in Council established one Supreme Court of Judicature, consisting of a High Court and a Court of Appeal, for the Colonies of Sarawak and North Borneo and the State of Brunei. The present disposition of the Judges is as follows:—the Chief Justice at Kuching, the Senior Puisne Judge at Jesselton, North Borneo, and two other Puisne Judges, one at Kuching and the other at Sibu. The newly-established High Court supersedes the former Circuit Courts, and the appellate jurisdiction, formerly exercised by the Chief Justice of Sarawak, now vests in the newly-established Court of Appeal. The Courts presided over by Magistrates are the District Court (civil and criminal); the Court of Small Causes (civil); the Police Court (criminal) and the Petty Court (civil and criminal). A new Courts Ordinance was passed on the 5th December, 1951, but it does not come into operation until the 1st May, 1952. Reference to this Ordinance will be made in next year's report.

Apart from the Courts mentioned in the preceding paragraph there are the Native Courts constituted under the Native Courts Ordinance. These are the District Native Court, the Native Officer's or Chief's Court and the Headman's Court. An appeal lies from the District Native Court to the Court of a Magistrate of the First Class sitting with a Native Officer or Chief and two assessors. There is a further appeal to the Supreme Court, in which the Judge sits with the Secretary for Native Affairs (or with a First Class Magistrate other than the Magistrate from whose Court the appeal lay) and with two assessors who must be Native Officers or Chiefs. As a general rule the Native Courts are competent to try only cases in which all the parties are natives, including cases arising from the breach of native law and custom, civil cases where the value of the subject matter does not exceed fifty dollars, and claims to untitled land.

Probate and Administration.

The Registrar assumed official administration of eleven deceased persons' estates under the powers vested in him by section 3 of the Administration of Estates Ordinance (Cap. 80). These estates were duly administered and the assets and property, after payment of the deceaseds' just debts and liabilities, were distributed amongst all the heirs and beneficiaries according to the shares they are entitled to by law and custom.

A large estate fell during the year which paid the maximum rate of duty of 20%.

Lunatic Persons' Estates.

The official Assignee administered three lunatic persons' estates. One was a Government servant, another was a barber and the third an Indian merchant.

Bankruptcy.

Three bankruptcy petitions were filed during the year. In all three cases the debtors managed to settle the creditor's claim by instalments after which the bankruptcy proceedings were annulled.

Deeds.

There was a slight increase in the number of documents registered under the provisions of the Registration of Deeds

Ordinance during the year over that of 1950. These comprise, powers of attorney, transfers, etc., and there has been a marked increase in the number of agreements registered. Bills of Sales have also shown an increase over those of 1950.

Business Names and Limited Companies.

Fifty-seven new business firms were registered under the Business Names Ordinance. The majority of these are dealers in general merchandise, piece-goods and groceries.

Two locally incorporated and four foreign limited liability companies were registered. These comprise two insurance companies, three general merchant companies and one banking company.

Patents and Trade Marks.

Four grants of "Exclusive Privileges" were issued during the year. All of these are United Kingdom patents.

There was an appreciable increase in the number of new trade marks registered. Renewals of registration amounted to thirty-six.

Trusts.

In the absence of a Public Trustee in the Colony the Registrar was appointed by the Court to administer two trust estates, one of which was a trust estate in a partnership concern, and the other a trust created by the will of a deceased person.

Court Fees, Fines, Forfeitures and Deposits.

There was an increase in the volume of transactions under this heading over that of 1950. The Registrar is also responsible for the direct supervision of this section in addition to his normal duties.

Money Lenders.

Two new Money Lenders Licences were issued, and seven renewals of Licences affected during the year.

(B) THE SARAWAK CONSTABULARY.

Strength and Recruitment.

A new appointment of Deputy Commissioner was made during the year and there was an increase of one Gazetted

Officer on the time scale bringing the present approved strength to 18 Gazetted Officers in addition to the Commissioner and his Deputy. Four of the Gazetted Officers included in the establishment are earmarked for duty with the police of Brunei State, adjoining Sarawak territory.

The Gazetted Officer strength was two below establishment at the end of the year.

At the end of 1951 there was a shortage of seven Inspectors in the authorised strength of twenty-six. Efforts to recruit Inspectors locally were not successful and suitable material for promotion to that rank was not found within the Force.

The Force, as a whole was 138 under strength at the end of the year. This shows a decrease of twenty-three over the deficiency for the previous year, which may be ascribed, to some extent, to the filip given to recruitment during the latter part of 1951 by the introduction of better pay, increased welfare facilities and publicity in the proper quarters. However there is no room for complacency as the effect of these improved conditions is being offset by the steady rise in the cost of living and the continuing increase in the wages available to unskilled labour in the oil, rubber and sago industries.

Enlistments during the first half of 1951 were only thirteen, but between July and December 126 new members were received into the Force, making, in all, an intake of 139 recruits during the year. There was a high rate of rejections on medical grounds among those who offered themselves for recruitment.

There was an increase in the number of Murut, Kayan and Kenyah recruits, and some Kelabits were, for the first time, taken into the Force during the year.

Casualties.

There was a further drop in the number of men discharged for inefficiency. This may be attributed to improved methods of training and more discrimination in the selection of illiterate recruits.

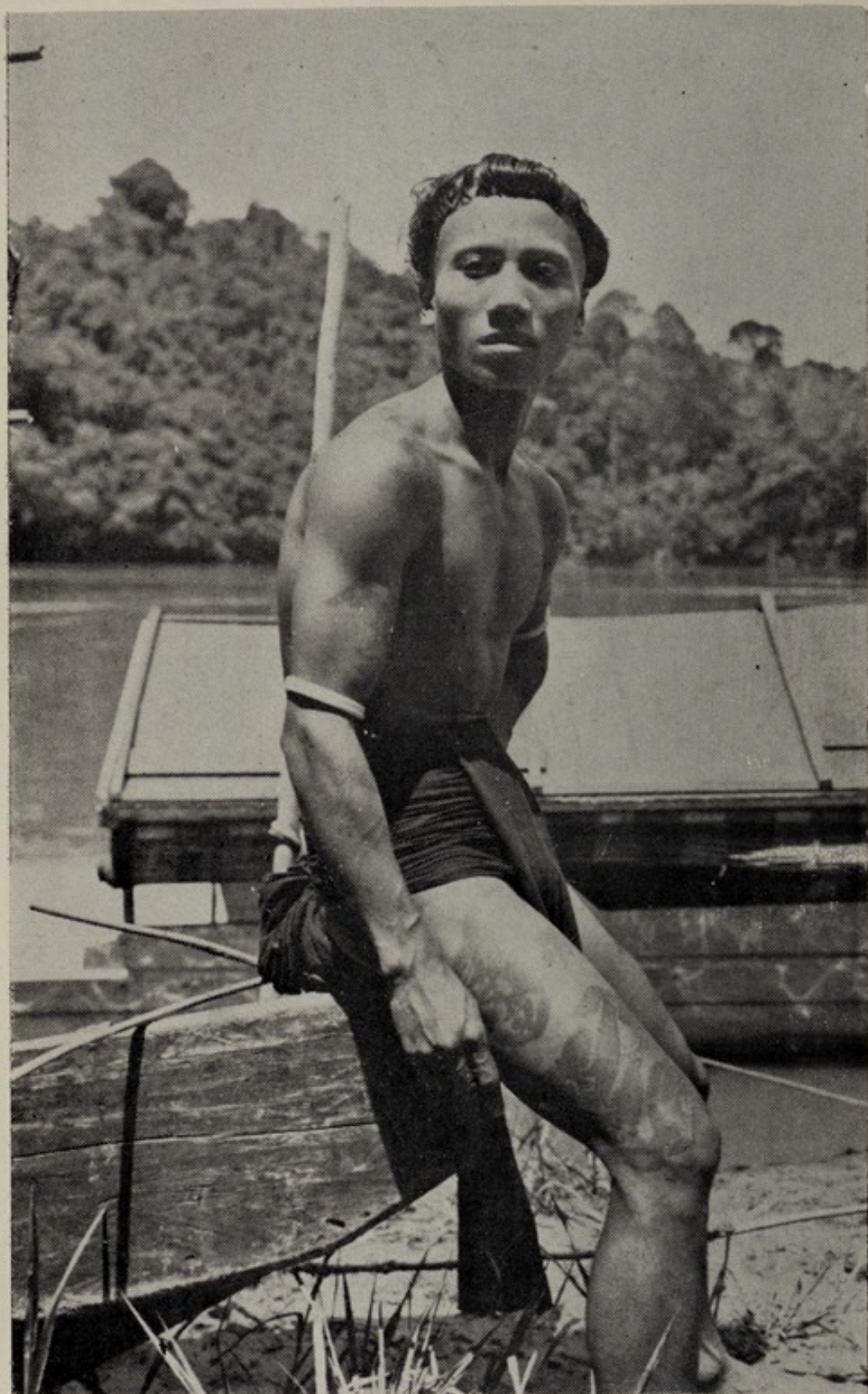
During 1951, 52 experienced men voluntarily resigned from the Force to take up more lucrative employment elsewhere. This leakage is difficult to check. Intelligent men who were illiterate on joining, find that their value in the



[Straits Times photograph.]

Malay policeman on duty outside the Astana, Kuching, the official residence of the Governor.

SARAWAK ANNUAL REPORT, 1951.



[Straits Times photograph.]

*Young Sea Dayak resting on his prahu on the banks of
the Rejang River.*

labour market has been considerably increased by the training and discipline to which they subjected in the Constabulary.

Education and Training.

Of the 139 recruits admitted during the year 122 were illiterate and had to be given instruction in reading and writing Romanized Malay. The majority of them are keen and are making satisfactory headway. In addition to these studies, they follow the regular Training School curriculum for all recruits.

Only six recruits were discharged during the year as unlikely to become efficient.

English continued to be taught at the main centres. Attendance at classes is not compulsory but these are well patronised. In the Police Training School and in Miri the teachers reported excellent progress by the various classes. In the Police Training School the position as regards students of English was as follows at the end of the year:—

Senior Class	...	...	7 men
Intermediate Class	...	...	12 „
Junior Class	...	...	15 „

A number of N.C.O's and men attended Refresher Courses at the Training School during 1951. When the staffing position is better, more advanced classes will be held.

Every N.C.O. in the Force was put through a short course in Riot Drill and the law relating to Unlawful Assemblies and all had to pass a test at the end of the course.

One Dayak Gazetted Officer undertook a course of training at the Police College, Ryton-on-Dunsmore, during the early part of the year.

Welfare.

The Constabulary Co-operative Store caters for the needs of men at Headquarters, Special Branch, C.I.D., Police Training School, and Kuching Central Station. Its membership now totals 434, and the turn-over for 1951 was \$157,485. A Co-operative Store may be opened in Sibu during the coming year.

The Constabulary Thrift and Loan Society continued to expand and membership has now reached 675, an increase of 373 over 1950.

The police are encouraged to grow their own rice and vegetables, especially in outstations where the cost of goods is higher owing to increased transport charges. A police communal garden was started at Sibu and has proved to be very successful. Vegetables were made available to the men at an infinitesimal cost as compared with the prices ruling in the market and shops. When a suitable police craft becomes available it is intended to convey monthly essential supplies to the main centres where re-distribution can take place. It will thus be possible for the policeman in out-of-the-way places to live within his means without any lowering of standards.

The Inspectors and Rank and File Welfare Committees, which were started in 1950, continued to hold regular meetings during 1951.

A canteen run by policemen for policemen was opened at the Training School. It includes a reading room where the men can read or study undisturbed. The fittings were chosen with an eye to comfort and homeliness and it has been very well patronised.

The personnel of the Training School have now their own laundry run on modern lines and at a minimum cost to the users.

Messing arrangements have been further improved at the Training School and the men have been given a varied and well-balanced diet at a cheap rate. The effect of this is obvious in the better appearance of the recruits and the increased energy brought to their work.

During the year, films supplied by the Government Information Officer have been shown to the men and their families in Kuching.

A very successful sports meeting was held in Kuching on the 20th October, 1951. Many attractive prizes were presented by members of the various communities. When a new parade ground is ready Colony police sports will be held.

Health.

The health of the Force showed an improvement over the previous year. There was a considerable drop in the number of men requiring treatment at the dispensary and in hospital. This may be due to better conditions of service and more attention to personal hygiene.

There was a decided decrease in the number of men malingering or reporting sick for trivial reasons. Only nine such cases were reported.

Discipline.

There has been a noticeable drop in the total number of disciplinary offences between 1950 and 1951. This can be attributed to the introduction of improved salary rates and the development of welfare facilities. It has been the policy during the past two years to refrain from inflicting a financial penalty when other suitable means of correction were available. A total of 15 men were dismissed and, of this number, 13 had been convicted in Court mainly in respect of sleeping whilst on armed sentry duty. The remaining 2 men were dismissed on other disciplinary grounds.

Stations.

One new police station was opened during 1951 at Tebedu in the First Division, in a frontier district. There are now 55 stations in the Colony, and of these, nine are on VHF Radio communication with Headquarters and three on HF radio, with extensions to Brunei, and to Labuan, and Jesselton in North Borneo.

Special Branch.

A further re-organisation of the Special Branch is contemplated. The Branch is to come under the direct control of the Deputy Commissioner, and a Superintendent will be posted for duty in the Oilfields area to cover the Northern part of the Colony and the State of Brunei.

Marine Branch.

The Marine Unit which was started in 1950 now consists of two Sergeants-Major, one Corporal, two Lance-Corporals and six Constables. Government will be asked to increase the Inspectorate strength so that men with sufficient authority and nautical qualifications will be available at all times in each launch.

When the staffing position permits, it is intended to re-organise this Unit. A gazetted officer with naval experience will train the men along proper marine police lines.

It is hoped to increase the number of *sampans* for police use in outstations.

The non-availability of craft naturally restricts the movement of both officers and supervising N.C.O's.

Police sea transport consists of 1 motor launch and 39 sampans. Outboard engines are available for 9 other craft.

Government have purchased a steel hull for conversion into a craft suitable for police work.

Auxiliary Constabulary.

Owing to the shortage of Gazetted Officers it was not possible to give more than a limited amount of instruction to members of the Auxiliary Constabulary. When the necessary staff is available this deficiency will be made good.

During the year amending legislation came into force. As was anticipated, this eliminated those members who were not interested in the Auxiliary Constabulary work as such, but in the cash payment received for services.

At the end of the year the strength of the Auxiliary Constabulary was as follows :—

Commandant	...	...	1
Inspector	...	...	1
Constables	...	...	263

The Auxiliary Force is 50% under strength.

Police Band.

The band carried out 49 public and 17 private engagements. The fees collected amounted to \$2,550. A number of re-conditioned musical instruments were purchased during the year. Public concerts were given at the Museum Gardens and also at various places during the regatta season.

It is generally agreed that the band under the capable direction of the Director of Music has continued to improve.

Buildings.

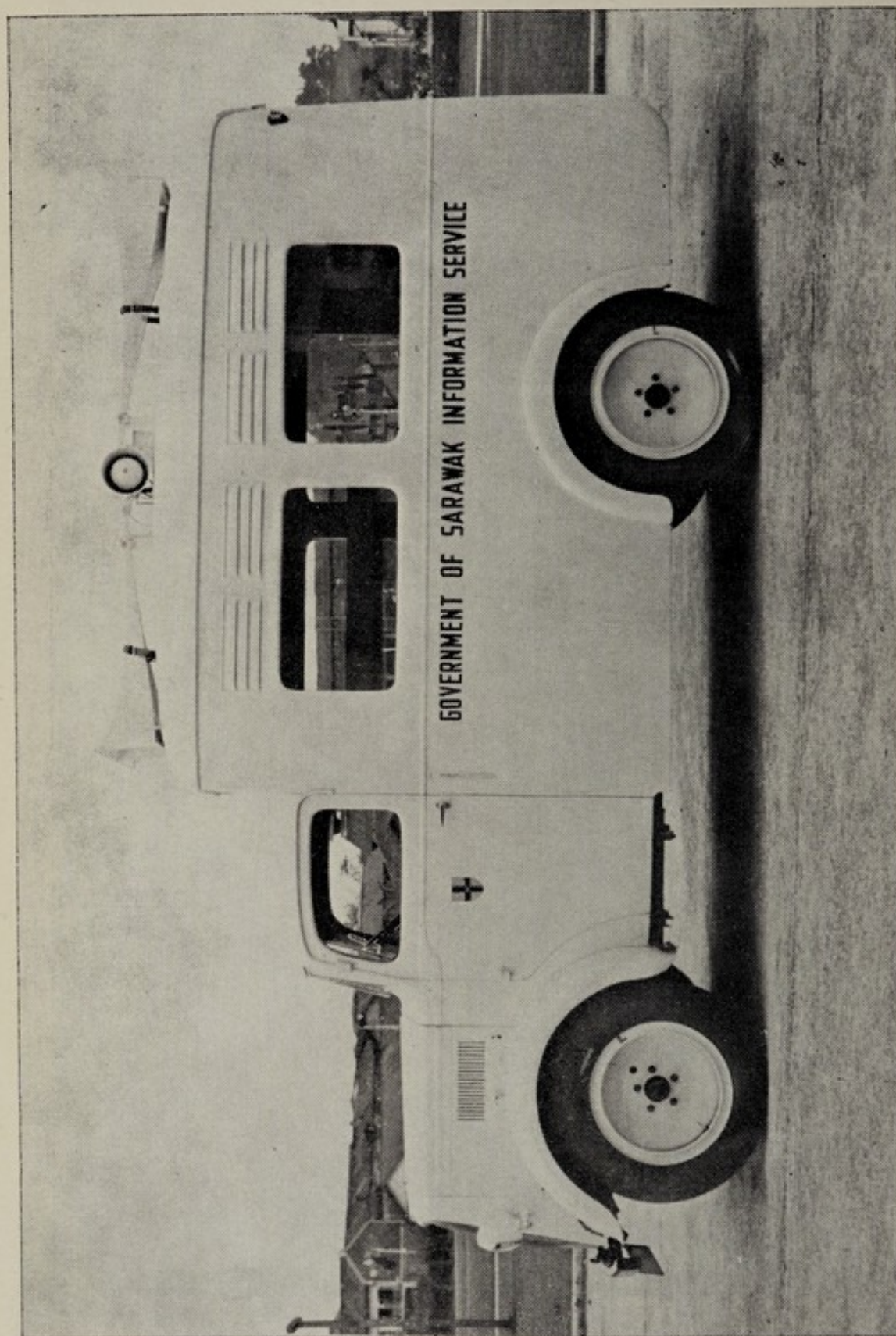
Eight new houses were built for Inspectors during the year, and accommodation for ninety families of the Rank and File was provided. Lecture sheds to seat 150 men were erected at the Training School.

The replacement of dilapidated quarters and buildings by new ones will continue during the forthcoming year.



[Straits Times photograph.]

Members of the Band of the Sarawak Constabulary.



[G.S.I.S. photograph.
A mobile cinema operated by the Government of Sarawak Information Service.

Defence and security.

Owing to the shortage of officers, it became necessary to decentralise defence and security duties except those in relation to V.I.P's.

There were 3,357 registered aliens in the Colony at the end of the year. It is considered that this figure falls far short of the actual number of residents subject to the Alien Laws but owing to the difficulties of communication with remote areas and the ease of ingress over frontier passes the movement of aliens is not always easy to control. It is hoped that with adequate manpower and the extension of radio telephony facilities the problem will present fewer difficulties.

Security checks were held at various places throughout the year, and of the 137,722 persons examined, 229 unregistered aliens were discovered. This resulted in 26 prosecutions under the Aliens Ordinance. These show an increase of approximately 10,000 over the 1950 figures of persons examined but a decrease of 17 in the number of resultant prosecutions.

Crime.

The crime rate was even lower than in 1950. There were eight reports of murder as compared with nine in the previous year, 57 reports of housebreaking as against 69 in 1950, and 690 reports of theft as compared with 720 in 1950.

If the boom conditions and full employment in the rubber, sago and oil industries do not continue, it is likely that the crime rate will increase, especially in respect of offences against property.

*(C) PRISONS.**Penal Administration.*

The Prisons Department consists of a Central Prison at Kuching, one female prison at Bau, three Divisional prisons situated at Simanggang, Sibul and Bintulu and ten small outstation prisons. The remainder have been converted into lock-ups or other Government buildings. The headquarters offices are situated in the Kuching Prison.

The department is administered by a Superintendent who during the year continued to combine this duty with the running of the Kuching Prison and the Kuching Boys' Home.

An Assistant Superintendent, who left for a course in the United Kingdom in September, was also stationed in Kuching. District Officers, appointed as Deputy Superintendents, to supervise and run the various outstation prisons.

Administration of the Prisons has been generally satisfactory. The standard of efficiency and discipline of the warders has been fairly good. The high price of rubber, pepper and other goods and the consequent opportunities of more lucrative employment elsewhere has made it impossible to keep the Prison Warder establishment up to strength during the year. There has been a steady decrease in prison population in all prisons.

There has been a little improvement in the degree of public interest shown in penal reform and prisoners' after-care; but it continues to be difficult to arouse public interest in assistance to voluntary classes and after-care work.

All prisons are visited monthly by Visiting Boards composed of Magistrates and representatives of the various racial communities and Prisoners' complaints and requests are dealt with by these boards. A Prisoners' Aid Committee has now been formed; the Kuching Rotary International assist greatly in this matter and in the rehabilitation of prisoners from the Kuching Prison on discharge. The Prison authorities continued to assist in obtaining work for prisoners on discharge.

Every endeavour has been made to develop the principles of modern prison vocational training in the running of the Kuching Prison but the difficulties to be overcome due to the lack of space and general facilities makes this extremely difficult.

During the course of the year a Prison camp was established at Batu Lintang (a rural area about two miles from the Prison). The building was erected by prisoners and made out of salvaged timber from condemned Government bungalows. Here, long sentence prisoners serving their last three months are sent for rehabilitation purposes. An area of 3 acres is under vegetable cultivation and the prisoners are under the supervision of one prison officer, who lives with them. So far this scheme has proved a complete success and the prison has become self-supporting in vegetables and has also been able to supply the Constabulary Depot needs. No additional trade parties were established. The revenue for

the year reached the figure of \$48,287.07 (£5,633. 9s. 10d.) and the saving to Government through purchases of Prison made articles instead of buying locally was \$50,773.13 (£5,923. 10s. 8d.)

The prison diet was altered slightly during the year, red beans being added to the rice ration and various fruits as in season issued in place of the daily banana as before, with beneficial results.

The Leaders and Trusted prisoners system is still working efficiently and the general earning scheme for prisoners has now been introduced, every prisoner serving a sentence of over one month being entitled to earnings. The rates are—labourer 50 cents, trainee \$1.00, artisan \$1.50, per week, out of this sum a prisoner must save 20 cents, 40 cents and 50 cents per week respectively, the remainder can be spent on small luxuries such as biscuits, sugar, appetisers, etc.

Approval for the new Prison Ordinance and new Prison Rules mentioned in last year's report has not yet been obtained.

The Prison Commissioners conference for South East Asia was held in Penang in December and the Superintendent of Prisons attended. He also took the opportunity of visiting the Singapore and Malayan prisons—Kuala Lumpur, Taiping and Penang.

Recidivism.

At the end of the year there were 15 recidivists out of a total of 116 prisoners serving sentences in the Colony. It is considered that the position in regard to recidivism is on the whole satisfactory. At the present time there is plenty of work available and there should be no necessity for a person to resort to crime when work is easy to get and wages are so high.

Juvenile Offenders.

Juvenile offenders serve their sentences at the Kuching Boys' Home, which is now administered by the Superintendent of Prisons. During the visit of Mr. Hilton the Home was found to be in an unsatisfactory condition and as a result of a Board of Enquiry it was decided by the Governor in Council that it should again be administered by the Superintendent of Prisons.

Classification of Prisoners.

As far as possible habitual offenders are kept separate from first offenders. However this is not always practicable owing to insufficient warders and the type of buildings.

Spiritual Welfare and Education.

Representatives of the various religious communities continued to visit prisoners in the Divisional prisons during the year. In Kuching mass was celebrated regularly in the prison and a spiritual welfare class was started by the Roman Catholic Mission. Priests of the Anglican Mission also visit and hold communion. Several Dayak prisoners are receiving Christian instruction and have adopted either the Church of England or Roman Catholic faiths.

General Welfare and Education.

A number of prisoners have continued to show great interest in education during the year. The Government Training School Kuching has sent voluntary teachers to take classes and also three prisoners (leaders) have given English, Chinese and Romanised Malay lessons twice weekly. A Chinese voluntary teacher has also attended the Kuching Prison twice weekly for instruction in handicrafts.

General Welfare.

Every endeavour has been made to obtain the services of voluntary visitors but with poor results. An efforts was made during the year and a meeting called, which was attended by many of the local Chinese merchants and others, to try and interest the public in prison social work, but very little was accomplished.

Library and Organised Games.

The library is very popular among the prisoners, and books for reading in Malay, Chinese and English have been provided. The British Red Cross Society is still making weekly donations of books and periodicals to the library. Facilities for badminton, volley ball, table tennis, chess and draughts continue to be available for prisoners during their recreational period.

Health and diet.

The small prison hospital at Kuching is still proving a great success and most cases are treated within the prison, only those of a serious nature being sent to the Government General Hospital for treatment.

Labour

No additional trade parties have been added during the year. The following is a list of the present trade parties:—

- (i) Basket making and reseating of chairs
- (ii) Blatt making
- (iii) Coir mat making
- (iv) Brick making
- (v) Tinsmithing
- (vi) Blacksmithing
- (vii) Carpentering
- (viii) Shoe repairing
- (ix) Laundry
- (x) Tailoring
- (xi) Builders.

Remission.

Remission of sentences is granted to prisoners sentenced to imprisonment exceeding one month. The amount of remission at present granted to prisoners serving up to twelve months is one-sixth, and to those serving over one year one-fourth, of the sentence. Female prisoners serving sentences up to one year receive one-sixth and over one year one-third remission of their sentence.

XII

Public Utilities.

Electricity Supply.

The Sarawak Electricity Supply Company Limited is responsible for the public lighting and power services throughout the country. This Company was formed in 1932 to take over the Government electricity undertakings then operated at Kuching, Sibü and Mukah only. In addition to these three stations the Company now operates in Miri, Bintulu, Mukah, Binatang, Sarikei, Betong and Simanggang. Government holds the majority of the shares, the remainder being held by Messrs. United Engineers Limited of Singapore who are also the General Managers.

Electrical equipment has come forward from the manufacturers very slowly since the war, which fact, coupled with the greatly increased demand for electricity due to the boom conditions during the last two years made it necessary to refuse many requests for additional supplies; some dissatisfaction was caused thereby. Difficulties have been further aggravated by a severe shortage of copper wire for transmission lines.

It was found possible to keep the Charges at 30 cents per unit throughout the year in spite of increases in the cost of fuel and labour.

The existing capacity of the Kuching Station is 1243 KVA but orders were placed during the year for a new 500 KVA generating set and two new substations of 300 KVA each with a view to increasing the generating capacity by 87%. Total units generated during the year were 2,726,090 which shows a 16% increase on 1950. The D.C. supply was closed down during the year and two D.C. 100 KW generating sets despatched for use at Miri, which had not been installed at the end of the year.

At Sibü the changeover from D.C. to A.C. was still going on at the end of the year and was not expected to be completed until mid 1952. Total units generated stood at 826,139 showing an increase of 25% on 1950. The station capacity

is 190 KVA plus 50 KVA not yet in commission and 112.5 KW D.C.

Supplies at Miri, Sarikei, Binatang, Betong and Simanggang were inadequate and had to be restricted. Capacities will be increased as soon as generating sets become available.

Capacities of existing small stations all of which are D.C. are as follows:— Miri 75 KW, Mukah 47 KW, Sarikei 50 KW, Binatang 25 KW, Bintulu 22 KW, Simanggang 25 KW and Betong 18 KW.

Total units generated by the Company throughout the Colony in 1951 were 3,525,200 being 17% increase on 1950; total number of consumers was 3,531 an increase of 12%.

Brooke Dockyard and Engineering Works.

The Brooke Dockyard and Engineering Works, Kuching, is a publicly owned Establishment operated under the control of a Board of Management and carries a staff of 45 permanent employees with a European Manager in charge.

The dry dock, opened during the year 1912, is 240 feet in length, 40 feet wide at the entrance and vessels up to 9 feet draft can be docked at spring tides. The dock entrance is closed by a steel caisson operated by the rise and fall of the tide, with pumping machinery to deal with water below tide level.

A steam driven jib crane with a lifting capacity limited to 5 tons is installed at the dock wharf.

Adjacent to the dry dock is a slipway constructed for launches up to 40 feet in length and 13 feet beam.

The machine shop is equipped with electric and oxy-acetylene welding apparatus, small brass melting furnace and a range of machine tools suitable for general mechanical engineering repairs comprising maintenance to hulls and machinery of local vessels, Public Works Plant, factory equipment and other utilities requiring mechanical engineering service.

During the year a new Punching, Shearing and Cropping Machine has been installed.

The machine tools are fitted with individual drives from alternating current motors using current from the town supply.

During the year ending December 31st 1951, 46 vessels were dry docked and 20 launches slipped for repairs.

Water Supplies.

Kuching.

Kuching water supplies are obtained from a Waterworks Reserve catchment area on the upper slopes of the Matang range, situated about 10 miles west of the Town. The water is of excellent quality and undergoes no treatment of any kind. The range rises abruptly from the coastal plain, making it impossible to locate an impounding reservoir of a suitable size at the correct contour level.

It is collected by means of dams on four main streams, together with a very small impounding reservoir arranged so as to give a gravitational supply to the town. During heavy rain the control valves at the dams are closed to prevent turbid water from entering the system.

The water is conveyed to Kuching through three quarters of a mile of open channel, $5\frac{1}{2}$ miles of 9" pipe, $\frac{3}{4}$ mile of 12" pipe and $8\frac{1}{2}$ miles of 14", 16" and 15" pipe. The pipeline crosses the Sarawak River on a 700 feet suspension bridge which was erected for the purpose. The main crosses this bridge on two 12" pipe, one on each side of a narrow central carriageway. The service reservoirs in Kuching are two steel tanks, one of 2 million gallons capacity and one of 1,600,000 gallons.

In addition there are two old reservoirs which are only used in a case of real drought, as they are low enough to necessitate pumping and chlorination of the water.

The actual distribution system is by approximately 30 miles of pipe varying from 3" to 9" in diameter. There are about 3,000 services connected up and all the private ones are metered. Water is charged for at 45 cents per thousand gallons with a minimum charge of \$1.00 per month. The smallest size of meter is provided free and there is a small rent for the larger sizes. Water supplied to shipping is charged for at the rate of \$1.00 per ton.

Prior to the Japanese war the consumption was nearly one million gallons per day. During the drier months of the year short rainless periods occur when the run-off drops below one million gallons per day but the storage available was

usually sufficient to provide for full consumption during those periods. Approximately every four years a longer rainless period was encountered, sometimes extending to 30 days, and it was then necessary to curtail the supply and to pump and chlorinate the water from the old lower reservoirs. Since the Japanese war the increase in population, and the poor state of the service pipe and meters have resulted in an increased consumption. It has been necessary to curtail the supply to certain parts of the town for a few hours per day throughout the year; nevertheless the consumption during 1950 averaged 1,195,342 gallons per day.

About 7 miles of the main pipeline from Matang was relaid during the year and it is anticipated that this work will be completed early in 1952. The new pipes are 15" concrete lined cast iron pipes and though this improvement alone will not supply the steadily increasing demand for water for both private and trade consumption in the town it will give a much increased supply.

During 1951 the second storage reservoir was erected (1,600,000 gallons capacity) and the work of cleansing and maintenance of the old tank was proceeded with.

Surveys were made during the year with a view to finding a completely new source of supply; the only possible sources identified will probably require pumping stations and filtration and purification plant situated at some distance from Kuching.

Much work has been done during the year in the cleansing and replacement of meters and service piping and new mains have been laid in some of the roads. This work is part of a progressive long term programme of which as much as possible is done each year.

Simunjan and Bau.

Gravity water supplies exist at Simunjan and Bau, the water being of reasonable quality but the mains and distribution pipes are in very poor condition resulting in inadequate and unsatisfactory supplies. Financial provision for the rehabilitation of both systems was made in 1951 and orders placed for the necessary pipes.

Sibu.

A new waterworks, which was under construction before the war, was put into partial operation in 1947 and came into

full operation in 1949. This is the only Government waterworks in the Colony where full clarification and purification of an unwholesome supply is carried out; the water is pumped from the Rejang river, treated with alum, passed through mixing and flocculating chambers where some 90% of the dirt is chemically precipitated, through settling tanks where the sediment settles to the bottom, and through gravity filters which remove any remaining dirt and bacteria. As an extra precaution the water is then chlorinated before being pumped to an 80,000 gallon tank 90 feet above the general level of Sibu town to which it gravitates through a 9" main $1\frac{1}{2}$ miles long. Due to inadequate voltage of the electric supply the rated output has never been obtained while the consumption has roughly doubled to over 400,000 gallons per day; even with 24 hour pumping the supply is inadequate during evening peak consumption hours. Advantage has been taken of the proposed changeover to A.C. to order larger electric motors and new pump impellers which should increase the output by 60%. The Electricity Supply Company has also undertaken to ensure that adequate voltage is supplied to the new motors by installing an alternator at the waterworks station.

The number of private services increased during the year by 10% to 638 compared with an increase of 23% in 1950. The population served is about 10,000.

Mukah.

Work on construction of the new waterworks at Mukah continued during the year. $2\frac{1}{2}$ miles of 7" Asbestos Cement pipes, of Italian manufacture, were laid connecting the pumping station to the filter house and $\frac{3}{4}$ mile 5" distribution main to the bazaar and more populous areas of kampongs. Pumping sets of which delivery was promised in January had still not arrived at the end of the year so recourse was made to an old set from the old Sibu waterworks with which a 2 hour emergency supply of raw water was maintained to four distributing points, one in the bazaar and three in the kampongs. Limited storage is provided at these points by 400 gallon tanks. Three large pressure filter shells from the old Sibu waterworks were successfully launched at Sibu, towed to Mukah over 100 miles away including 40 miles of open sea, set in place at new filter station and now await delivery of further equipment from the manufacturers. The final scheme

includes equipment for chemical precipitation, sedimentation, filtration and chlorination with a gravity supply from an overhead pressed steel tank. In view of past experience of corrosion of metal pipes in this area it was decided to use asbestos cement pipes down to the smallest size manufactured. Special pipe joints using no metal are also employed throughout.

Sarikei and Tanjong Mani.

The town of Sarikei was supplied during the dry months by a water barge of 36,000 gallons capacity. The bulk of the water was supplied to the barge by ships of the Sarawak Steamship Company; on the inward trip water from Singapore was supplied and subsequently replaced in Sibü, on the outward trip Sibü water was provided. The Company made no charge either for transport or pumping and the service was very much appreciated. The total provided during the year was 1,600 tons. It is hoped that a scheme for piped water supply to Sarikei and Binatang will be prepared in 1952.

The water barge also supplied water to shipping at Tanjong Mani but since ships normally require water in quantities in excess of 100 tons, and since this amount is outside the capacity of the Company's ships, it is necessary to tow the barge to Sibü for filling. Difficulties in obtaining craft to do the towing and insufficient notice by the ships resulted in the service being unsatisfactory and only 663 tons were delivered compared with 1,950 tons in 1950. If this port is to be developed a powered lighter will be necessary.

Miri.

The supply from the Sarawak Oilfields system to Miri town averaged 35,000 gallons per day which is inadequate for a population 5,000. Ways and means of improving this situation have been examined carefully and it is now considered that a combined Company and Government scheme is probably the best solution.

Government quarters at Tanjong Lobang and Brighton have their own small waterworks. The quantity is more satisfactory but the quality often poor. A new diesel pumping outfit has been ordered.

Bintulu.

The Bintulu water supply consists of $4\frac{1}{2}$ miles of 6" Asbestos Cement pipe from a diversion dam in an upland stream to 50,000 gallon elevated steel tank in the town from which distribution takes place.

The water is of very good quality and requires no purification. The service was extended during the year to the new Residential Area. This was the first waterworks in Sarawak using asbestos cement pipes and now even after 22 years these remain satisfactory.

Limbang.

Water supply to Limbang town is from two reservoirs on the same stream but at different levels. The upper reservoir provides water at good pressure but dries up when rainfall is insufficient, the lower one provides water all the year round but the pressure is insufficient to reach all consumers. It is proposed to pump from the lower to the upper reservoir during dry periods so that the supply can be satisfactory at all times. The quality of the water is good and requires no treatment.

The Residency and District Officer's bungalows are at too high a level to obtain water from the town supply and have a small supply of their own from a small dam.

*Gas Supply.**Miri.*

The possibility of gas being supplied to Miri from the oilwells, by Sarawak Oilfields Limited, was investigated during the year and a plan has been submitted for the consideration of the Company.

*Public Works.**General.*

Staff shortages increased during the year with the retirement of the Director; the Department was fortunate in being able to engage a Mechanical Engineer locally. At the end of the year there were 4 vacancies for Engineers and 1 for Assistant Engineer.

Delayed deliveries of engineering materials, equipment and spares from abroad, severe shortage of local building materials and labour due to the increase of private building,

and steeply rising costs due to boom conditions, and the shortage of staff made the efficient operation of the Department extremely difficult during the year.

The staff is to be congratulated on the willingness with which these additional burdens to their already heavy duties were accepted.

Kuching and First Division.

The new Printing Office was completed early in the year and plans made for the conversion of the old building for use by the Municipal Department. Delivery of materials for the new import godown proved very slow indeed and no construction work was possible during the year. A new station was under construction at Lundu and new office and quarters were constructed at Tebakang.

As in previous years the building programme was mainly the construction of housing for Government employees; the following buildings were either completed or under construction during the year:—8 Senior Service bungalows, 8 Senior Service flats, 31 Junior Service quarters, 3 Police Inspectors quarters and 3 Police barracks.

Second Division.

Junior Service quarters were built at Simanggang, Engkilili, Saratok, Sebuyau and Lingga, a new outpatients department was added to the Simanggang hospital and work commenced on an additional ward.

New commercial wharves were constructed at Lingga, Engkilili and Debak.

Senior Service houses at Simanggang were brought up-to-date by the installation of water borne sanitation.

Third Division.

A total of 21 junior service quarters, 8 barracks, one Senior Service bungalow and one police station were either under construction or completed. A Customs checking station was constructed at Tanjong Mani to enable imports as well as exports to be handled by this deepwater port, and permanent concrete navigational aids constructed at selected sites from Rejang to this port.

A new mental ward and laundry drying shed were constructed for the Lau King Howe Hospital, Sibü, while a new T.B. ward and Nurses' Home were under construction.

A new transmitter building was erected for the Posts and Telegraphs Department.

Roads and Wharf for a new bulk oil store was completed at Sungei Merah near Sibü so that petroleum products could be more safely stored and handled.

New launch wharves were constructed at Kapit and Sarikei while the most inadequate launch wharf at Sibü was extended as far as site conditions would permit.

Test boring to depths of 100 feet were carried out by Messrs. Ewart and Co., at Sibü to ascertain foundation conditions in connection with proposed development of this port.

Test borings and soundings were also completed at Tanjong Mani so that the possibilities of constructing deep water wharfage could be investigated.

Private building throughout the Division was at an all-time high. Figures are not available of the number of dwelling houses constructed but, in spite of high prices and scarcity of building materials the people showed a commendable desire to translate their high profits on rubber and pepper into good quality houses.

There was a remarkable increase in shophouse construction with 118 permanent reinforced concrete shops, 40 shops of brick ground floor and timber first floor and 57 timber shop buildings at a total estimated cost of \$4,500,000.

Fourth Division.

Of the 77 first class and 20 second class shophouses for which provision is made in the layout of the new Miri bazaar there remain only five second class shops to be completed and these were under construction at the end of the year. Construction of the fish market, retaining wall, and jetty were completed and the vegetable/meat market and open air market were under construction. The Chartered Bank building and the Cinema are the only buildings remaining to complete the bazaar according to plan, a contract has been let for the former and preparations of plans are reported to be in hand for the latter.

The new Government office was opened by His Excellency the Governor in October. This is a modern type single storey building, in reinforced concrete, with a floor area of 13,200 square feet.

Construction of a new hospital was commenced towards the end of the year, a contract being signed for the administration block, general ward, T.B. ward, kitchen and mortuary.

A new Junior Service Housing area was acquired during the year at the foot of Tanjong Lobang hill, two miles from Miri Bazaar. The site is high and near the sea. The construction of six junior service quarters was put in hand.

Police barracks were constructed at Miri, Lutong and Kuala Baram, and one Constabulary building at Miri.

Fifth Division.

A building programme for Customs Department was carried out including the erection of godown, office and quarters at Punang, Lawas, office and quarters at Awat-Awat, Lawas, and Rangau, Limbang, Checking Station at Pendam on the Limbang-Brunei border, two Customs quarters at Kuala Lawas, and extension of Customs Godown, Limbang.

Prison lock-ups were provided at Sundar and Lawas, one Junior Service quarters was replaced at Limbang, new padi store erected at Limbang and a new timber bungalow built for the District Officer, Lawas.

New wharves were constructed at Awat-Awat, Punang, Rangau and Limbang, while major repairs were carried out to the main Customs wharf, Limbang.

XIII

Communications.

(A) WATER.

For the first two months of the year all services between Sarawak Ports and Singapore were badly interrupted by very bad North East monsoon weather and heavy rains.

For the remainder of the year all services were maintained with good regularity.

The total nett tonnage of vessels from overseas both in and out shewed a slight increase over 1950.

Timber vessels calling at Tanjong Mani, Rejang River shewed a slight increase over 1950 but far the greater number called in the second half of the year.

Coastwise traffic remained approximately the same both as regards number of vessels and tonnage, but there was nearly 10% increase in the number of passengers conveyed between Ports.

Government craft. Two new 40 feet River launches were put into service and in September a 150 ton cargo coaster named "Dido" was acquired. The "Dido" found full employment immediately carrying P.W.D. stores and constructional materials, padi and an occasional charter carrying timber to various places for local requirements.

H.M.S. *Dampier* completed a most important Hydrographic survey of some 90 miles of coastline between Tg. Tatau (Bintulu) and Tg. Batu (South of Miri) and extending some 30 miles out to sea. Also a large scale survey was carried out of Kuala Simulajau.

This survey was very long and arduous work and H.M.S. *Dampier* completed a task which has filled a long-felt want on the coast. Some twenty reefs and rock pinnacles were discovered, all of them dangerous to ocean vessels (Deep Draft) and some of them dangerous to coastal vessels (Shallow Draft). The chart when published will be of considerable interest to all and most important to mariners.

Marine Casualties.

Casualties were few, one small coaster being wrecked at Mukah and one ocean vessel grounded at Kuala Rejang. The ocean vessel was refloated after discharge of some 800 tons of cargo without suffering any damage.

Buoys and Lights.

The new electrical equipment was installed at Po Point, Tg. Sirik and Lutong, and acetylene equipment at Tg. Lobang. The new equipment has been landed at Tg. Baram and Tg. Jerijeh and these two lights should be in operation early in 1952.

The new lights are very powerful and apart from a few teething troubles are proving very satisfactory.

A vessel approaching Po Point in heavy rain reported picking up the head-land (430 ft.) on her radar at 10 miles and Po Point light at 8 miles distant.

Under very good conditions of visibility the loom of Po Point light has been seen from Tg. Datu (60 miles) and the loom of Tg. Serik light has been seen at 85 miles.

A number of concrete piles with top marks have been erected on the river banks between Kuala Rejang and Tg. Mani for the guidance of timber vessels.

(B) AIR AND ROADS.*Kuching.*

The International Airport at Kuching is the designated airport of entry and departure for international air traffic. Construction of this Airport was commenced during 1948, and had progressed sufficiently by September, 1950, for schedule and itinerant traffic to use it as from that date.

The Airport provides an all-weather asphalt macadam surfaced runway 1,500 yards long and 50 yards wide. There are no approach obstructions to this runway which offers possibilities for extension to over 2,000 yards basic length. Consolidated grass-surfaced areas extending to 175 feet on each side and 200 feet at each end of the runway are in an advanced stage of construction and will, when complete, provide a strip of dimensions appropriate to the runway basic length. An asphalt macadam taxiway to an apron of similar

construction is provided adjacent to the terminal building. The building comprises the Control Tower, Signals and Meteorological departments, Waiting and Refreshment room, Office, Customs, Immigration and Health accommodation.

During the year under review, traffic requirements over the route Singapore-Sandakan-Singapore again necessitated an increase in Malayan Airways Limited schedule operations; and during May, 1951, an additional weekly schedule was instituted, thereby establishing four schedules weekly through Kuching, Singapore-Sandakan-Singapore. A total of 387 landings were effected by Malayan Airways Ltd., during 1951. Garuda Indonesian Airways effected 4 schedule landings; and landings by Military and private aircraft made up the total of 463. Malayan Airways landed 1,455 passengers at Kuching, up-lifted 1,613 and carried 2,611 in transit.

An analysis of the various types of aircraft which operated into Kuching during 1951 indicates a preponderance of DC3 movements which, as in the case of the preceding year, was due chiefly to Malayan Airways Ltd. utilization of this type of machine. Garuda Indonesian Airways operating their Djakarta-Manila-Djakarta service contributed heavier machines with their "Convair" aircraft but on no occasion was the conservative bearing capacity of 30,000 lbs. per single isolated wheel load approached in runway utilization. In addition to a capacity for handling heavier category aircraft such as those operating over trunk routes Kuching Airport amply justifies the "International Airport" designation. In this direction it is of particular interest to note that on 26th January, 1951, the World Health Organisation recognized Kuching as an "Authorized Aerodrome" and confirmed the Airport as a "Sanitary Aerodrome" and "as constituting a local area".

Supervision of Air Traffic Control and development and operation of Navigational, Approach and Landing facilities covering Sarawak territory and Kuching Airport was undertaken on a three-year contractual basis by International Aeradio Ltd. Development commenced during the later part of 1949, and despite unavoidable delays in manufacture and shipment of radio equipment Kuching Airport commenced provision of full-scale facilities during December, 1949. These comprised Approach and Aerodrome Control facilities on two VHF and one HF radio-telephone channels, VHF

Direction-Finding for homing aircraft to the Airport, one W/T channel guarding the aircraft "enroute" communication frequency, and Point-to-Point communications with Singapore and North Borneo. During July, 1950, a new radio-beacon replaced the hand-keyed equipment originally put into service as an Approach and Let-down and also a Route Navigational facility; and by May of the year under review all specified facilities were being operated with newly delivered equipment. The position by this time was such that Kuching was able to provide an additional "enroute" radio-telephone facility, at the same time assuming responsibility for the collection of airmove signals traffic from the North Borneo airports for onward transmission to the Flight Information Centre, Singapore. By this means Kuching was able to assist in reducing signals delays from hours to a matter of minutes, and by assisting the Flight Information Centre to maintain current information on progress of flights, contributed extensively to the safety of air navigation over the Borneo routes generally.

Sibu.

Work on the rehabilitation of the old airfield at Sibu was commenced during the year and by the end of the year the runway was completed and temporary buildings erected while the construction of the parking apron was under way. It was decided that the gravel surface of the runway should be covered with grass so as to minimize danger from flying stones, dust and erosion; accordingly a 1" layer of top soil was spread over the whole area. Grass proved most reluctant to grow and at the end of the year the runway was not yet fit to take aircraft. It is anticipated that the necessary radio aids to navigation will be installed by May, 1952, by which time the grass is expected to be satisfactory. The runway is 1,200 yards long by 50 yards wide.

It is anticipated that Malayan Airways will use this airfield on scheduled flights.

Miri.

The grass surfaced landing ground at Lutong near Miri has been maintained by the Sarawak Oilfields Limited who operate for their own private use—one amphibian and one land aircraft.

*Roads.**(a) General.*

The main method of transportation in Sarawak, both for passengers and freight is by inland water and coastal routes. Kuching, Sibü, Sarikei and Miri have a small network of roads with earth roads branching to outlying agricultural, rubber and forest districts but there are no connecting trunk roads.

There is a road from Kuching to Serian, 40 miles long, including 15 miles of bitumen macadam surface, 19 miles of rough waterbound macadam, and 6 miles of earth road.

Generally speaking road construction and maintenance costs continued to be high during the year. Traffic continued to increase as the boom in pepper and rubber showed little abatement with consequent serious deterioration to metalled and earth roads. Wages for unskilled labour remained high throughout the year. A road reconstruction scheme was drawn up during 1951, and finance approved, for the reconstruction of all important metalled and earth roads to bitumen macadam surfaced standard. To carry out this scheme properly, equipment, now a long delivery, had to be ordered, surveys made, and detailed specifications drawn up. As a result major reconstruction works are unlikely to begin before the end of 1952.

The following is an approximate census of road mileage in Sarawak :—

(i) All weather, bitumen or concrete surfaced roads	...	...	75 miles
(ii) Metalled roads	...	...	82 ,,
(iii) Earth roads suitable in dry weather for light vehicles	...	...	118 ,,
(iv) Earth paths, suitable for jeeps in dry weather	...	...	195 ,,

(b) Kuching Municipal Roads.

Kuching with its 31 miles of bitumen surfaced and metalled roads the largest network in the country. With the heavy increase in traffic upkeep of the metalled roads to good standard proved difficult, particularly during the latter part of the year. Average maintenance expenditure on road

surfaces was \$108 per mile per month. Maintenance of verges and drains is carried out by the Municipal Department.

The largest work undertaken during the year was the resurfacing of Main Bazaar. This project consisted of scarifying and regrading the existing 10,000 square yards of surface, after which a 2" coat of premixed bitumen macadam was laid. The bitumen and stone were mixed at the 7th Mile Central Mixing Plant, set up in 1950, and which continued working during 1951. By working 2 shifts until 10 p.m. daily, the whole of this work was completed in 22 days with a minimum dislocation to traffic. The river edge of the bazaar was piled at 12" centres, and provided with a 6' x 6" concrete haunch.

Petanak Road, which is $\frac{3}{4}$ mile in length was resurfaced by the same method.

A 2-year plan to strengthen Central Road was started on during 1951. The sides which are subject to heavy erosion being built up with a masonry retaining wall. Half the whole work was completed.

Other works of minor nature included replacement of bilian box culverts with R.C. pipes, and surfacing of private roads and driveways.

(c) *Kuching District.*

District roads consist of approximately 40 miles of road mostly metalled surfaced. Maintenance costs were high during 1951, as daily labour wages stayed up. Verge and drain maintenance alone by contract labour is now costing approximately \$100 per mile per month.

Three new roads were constructed during the year. The major of these now gives good access to Kuching Airport from 6th mile Penrissen Road. This new road is $\frac{3}{4}$ mile in length, and was built to Class I standards. Road width is 20'. Jungle clearing and earthworks were done departmentally using earthmoving equipment. Base and premix bitumen surface course construction were done by contract labour as were 4 R.C. pipe culverts and one R.C. slab bridge. Work commenced in mid February, and the road was completed and opened to public traffic on 1st September. The new road brings the Kuching Airport $1\frac{1}{2}$ miles nearer to Kuching, the old access having been a rough construction track from 7th Mile Bazaar.

A new secondary road was cut in from 2½ mile Rock Road to open up a new Government Housing Estate. This road is ¾ mile long, 15' wide, with a 6" rubble base and a 2" grouted bitumen macadam surface course. A further ½ mile extension of this road is planned for 1952, and when finished the whole road will give access to 20 first class house sites.

Another new secondary road was cut in from 3rd mile Pending Road down to the Sungei Tabuan. Primary purpose of this road is to give access to the new Government sponsored Henghua Co-operative Fishing Village, so that fish can be brought into Kuching Markets speedily and economically. In addition the new road will serve travellers to Kuching from Sungei Kuap. The road is 15 feet wide, with 6' verges, and is 1,200 yards in length. At present the surface is water-bound macadam on a rubble and pitched stone base course. Two R.C. pipe culverts and one timber bridge had to be built.

Reconstruction of Batu Kawa Road continued from 1950 when 1½ miles had been completed. The remaining 3½ miles, and one timber bridge were completed by the end of April. With proper maintenance this waterbound macadam road continued to give good service throughout the remainder of the year.

Another Government Junior Service Housing Scheme was prepared at 2nd Mile Rock Road. The area is low lying for the most part and considerable quantities of filling material had to be brought in from a nearby earth pit. 41 sites were prepared during 1951, involving carting approximately 6,000 cu. yards of filling, and all of which had to be excavated and spread by hand. 1,300 lin. yards of roadway, and 8 R.C. pipe culverts were constructed.

Using premixed bitumen macadam from the Central mixing plant at 7th Mile, Wireless compound road was surfaced in April.

The 7th Mile Quarry, which is the only present source of stone for Kuching and District produced 19,000 cu. yards of crushed and 12,000 cu. yards of uncrushed stone during the year. The present quarry site, once a large hill has only about another 12 months' life, after which another hill about ½ mile away will be exploited. The present crushing plant will not be moved but plans for its modernization are in hand.

Other works of a minor nature included repairs and re-decking to timber bridges, and replacement of damaged culverts by R.C. pipes.

(a) First Division Roads.

These consist of the 40 mile trunk road to Serian, and the 26 miles of the Upper Sarawak network in Bau District.

30 miles of the Serian Road are being surfaced with bitumen macadam under Colonial Development and Welfare Scheme No. D1076, the remaining 10 miles having been surfaced before the war. Also included in this scheme is the strengthening and reconstruction of 2 major and 13 minor bridges to take 20 ton loads. Work completed to date is 5 miles of surfacing, 1 major and 7 minor bridges.

Of this 3 miles of surfacing 1 mile of metalling and 3 bridges were completed in 1951. A contract for surfacing 6 miles from 12th to 18th was cancelled in February after only one mile had been completed. The standard of work had proved unsatisfactory, and stone from 18th mile began to run out. Surfacing work did not recommence until October due to the lack of an air compressor and 2 further miles were completed by the end of the year.

Maintenance of this trunk road was carried out during the year under both physical and economic difficulties. Labour was scarce and expensive, on account of pepper boom, and additional financial aid had to be granted before the end of the year. An average of \$123 per mile per month was expended, but even this failed to keep pace with the deterioration caused by bad weather and increasingly heavy and more numerous traffic.

In Bau District, the main Batu Kitang Road, closed at the end of 1950, remained closed during 1951. This road has a high priority under the Road Reconstruction Programme. The 4½ mile Bau-Buso Road was reconstructed and strengthened with limestone rubble and mine tailings as a surface. This now provides a good link with the river, which is the main means of communication with Kuching. Most maintenance attention was given to the 6 mile long Krokong Road, which provides a trade link with Indonesian Borneo.

In Serian District, the Tebakang Track, built in 1948 with Colonial Development and Welfare Funds was maintained, and was used by light vehicles in the dry season.

(e) *Second Division.*

There was no new road construction carried out in the Second Division. Survey work on the proposed road to Simanggang from Serian was seriously hampered by lack of labour.

(f) *Third Division.*

Road communications throughout the Division continued to be most unsatisfactory, except between Mukah and Oya where the sandy nature of the terrain favours road maintenance; elsewhere the combination of swamp, clay, lack of stone and increased traffic made roads maintenance very difficult; fortunately the rainy season was not so wet as usual and more funds were forthcoming so it was found possible to keep open the Sibu roads system. Lower Rejang did not fare so well financially and at the close of the year Repok Road was closed to traffic.

A new gravel source was located and opened at Leba-an 10 miles down-river from Sibu and proved invaluable at the beginning of the year in rehabilitating the Sibu roads system which was then in a state of collapse. However, the quality was never good and towards the end of the year a drop in the price of commercial gravel and plentiful supplies enabled Leba-an to be closed.

An energetic search for stone in the Sibu district was carried out during the year under the guidance of the Geological Survey Department whose invaluable assistance was much appreciated. Much more stone than anticipated was discovered in various places but at the end of the year indications were that while a small quarry might be a possibility at Aup a suitable site for a large quarry sufficient to carry out the proposed roads reconstruction programme was not probable. However, the Geological Department had meantime discovered large quantities of excellent granite at the mouth of the Batang Lupar in the Second Division from which stone could be made available in the Third Division although at a much higher price than if stone had been available locally in quantity. It is proposed to examine Bukit Peninjau in the Sarikei area in 1952 with a view to ascertaining its suitability for a quarry.

(g) *Fourth Division.*

The completion of tarmac surfacing to roads in bazaar

area Miri was delayed due to difficulties in obtaining stones and bitumen and to shortage of labour but at the end of the year only China Street, Kingsway and River Road remained to be done.

Further improvements were made to Tanjong Lobang Road and Luak Hill which are on the route to the Oil Company's operational area of Bulak Satap and take very heavy traffic sometimes up to 20 tons. The company completed the remaining 25 miles to Bulak Satap.

With the co-operation of the local populations three miles of the abandoned Riam Road were put in order, otherwise shortage of labour would have precluded this work being carried out.

An arrangement was made with the Oil Company for Government to take over the maintenance of $6\frac{1}{2}$ miles of Company Open Roads for the second half of the year at an agreed rate of \$2,500 per mile, but rising costs and scarcity of labour made the arrangement unfavourable to Government and it is unlikely to be continued in its present form.

(h) Fifth Division.

In the Limbang area of the 5th Division a road roller was supplied and tarmac surfacing of bazaar road carried out for the first time. Available stone is of poor quality and the roads fit only for light traffic. Repairs were carried out on the Panderuan Road as far as the 7th Mile and this stretch is now in better condition than ever before.

Vehicles and Equipment.

During the year a new Air Compressor was installed at the 7th Mile Quarry and new compressed air lines laid to the quarry. Three Caterpillar Tractors, 2 D7s and 1 D4, were received during the year under the Marshall Air Programme. Two D7s were put to work on the airport extension. The D4 was sent to Sibul for work on the new airstrip there.

The department installed a new water pumping plant at the Leper Settlement and installed a lighting plant at the airport as well as four diesel-driven generators for Air Control.

During the year maintenance of plant has been carried out on road and earth moving equipment but repairs of Caterpillar tractors have been seriously held up because of the

difficulty in obtaining the necessary spare parts, many of which have been on order for over a year.

The ex-Japanese landing craft "Letta" had an extensive overhaul during the year which included, in addition to repairs to the hull plating, a reconditioned Ruston engine. This craft has proved of great value in transporting equipment and stores.

The outboard Motor Pool operated throughout the year and three new motors were added. Many motors are now getting beyond economical repairs and an extensive programme of replacement is in progress. The accounting side of the Pool proved unnecessarily cumbersome and a very much simplified system is to be introduced in 1952.

During the year 12 new Landrovers were delivered and were distributed throughout the Colony, thus allowing an equivalent number of worn out ex-Army jeeps to be withdrawn from service. The intention to replace 5 of the ex-Army tip trucks was not carried out owing to the non arrival of the new vehicles by the end of the year. Maintenance on these vehicles has been costly. The situation will be greatly improved in 1952 when the new trucks arrive. Seven additional trucks are expected during the first half of 1952.

A padi drying plant was erected at the Government Padi Mill.

The Bus Service, Across River, was operated by this department during the year and covered a total of 19,550 miles.

(C) POSTS AND TELEGRAPHS.

There were thirty-seven Post Offices operating at the beginning of 1951. In the latter part of the year the offices at Matu and Meluan had to be closed owing to staff shortage.

Mail.

Regular external mail services with Singapore were maintained by sea once a week, and by air four times a week in each direction.

On internal services air mail via Labuan was used between Kuching and the Third and Fourth Divisions.

Parcels.

11,100 parcels were despatched and 28,100 received.

External Money Orders.

Money Orders were sent and received to the following values :—

		<i>Sent</i>	<i>Received</i>
Malaya	...	\$ 76,450	\$37,140
India	...	146,240	420
United Kingdom	...	9,060	2,550
North Borneo	...	10,800	13,100

Telegraphs.

The amount of traffic is indicated by the following records of numbers of words :—

Foreign Traffic

		<i>Sent</i>	<i>Received</i>
1950	...	760,338 words	730,298 words
1951	...	866,140 ,,	901,680 ,,

Internal Traffic

		<i>Government</i>	<i>Private</i>
1950	...	2,076,528 words	854,464 words
1951	...	1,589,250 ,,	1,242,000 ,,

Savings Bank.

The number of depositors in the Savings Bank at the end of 1951 was 4,897, an increase of 1,512 during the year.

The amount standing to the credit of depositors at the end of 1951 was \$3,001,548.

Total deposits were \$2,243,055 and withdrawals \$585,173.

A special interest rate of 5% per annum was applied for one year deposits made during the first six months of 1951 provided no withdrawals were made. This had the beneficial effect of encouraging deposits, which was of assistance in fighting inflation in general living costs.

Telephones.

The position in regard to Telephones remained static.

The 400 line magneto exchange in Kuching, which was installed in 1925, continued to give service.

A new Automatic Exchange with 800 lines is planned for 1952.

The first phase in opening a country wide Telephone Service by use of V.H.F. Radio is also planned for 1952.

XIV

Control and Development of Lands.

Organisation.

In a country such as Sarawak where agricultural small holdings predominate and where the small holders are to a great extent illiterate, it is important that the tenure to the land must be simple to understand, and be derived from some recognised authority. The tenure must also be secure and be supported by a reliable official record of events which is at all times under capable technical scrutiny and at the same time easily accessible to the public for day to day transactions.

One department is responsible for the alienation of vacant Crown Land to settlers, the registration of title to land, the settlement and registration of native claims to customary rights in land, the cadastral survey on which all title registration is based, and the collection of Land Revenue. The organisation by which the Department is able to carry out its functions has remained the same as in previous years; the various functions are de-centralised as much as is possible and compatible with the need for adequate supervision. The department is divided into four main Land and Survey Offices, situated at the Divisional Administrative Headquarters, Kuching, Simanggang, Sibu and Miri. The latter office is also responsible for Land Affairs in the 5th Division as well as the 4th Division.

From the main offices, which are staffed by the department, the organisation goes down through general administrative channels to the smallest Government sub-district office where transactions in registered land can be drawn up on standard forms, signed and attested and then sent to the Land Registry at Divisional Headquarters. Documents are returned direct after registration. The following, however, receive the attention of the District Officer or Native Officer before being passed to the Land Office for final action, even if initial action has been instituted by the Land Department or some other Department.

- (a) Application for title to vacant Crown Land (except in Divisional Headquarters).
- (b) Development of Bazaar, Residential and Agricultural Schemes.

- (c) Reservations of land for Native Communal use or for Government purposes.
- (d) Disposition of landed property under the Administration of Estates Ordinance.

All surveys and field investigations necessary to define titles and establish claims to land are, however, the responsibility of the Land Office and are carried out by departmental travelling field staff operating under the control of the Superintendent of Lands and Surveys in each Division.

Technical and Administrative liaison is thus ensured, and the District Officer has opportunity to supervise the settlement of Crown Lands and the development of his district. Final approval for issue of title after survey is the responsibility of the Superintendent of Lands and Surveys for the Division to whom the application is sent if accepted by the District Officer.

REVIEW OF CURRENT LAND DISPOSITIONS DURING THE YEAR.

Applications for new land.

Applications for Crown Land during the year amounted to a total of 35,952 acres from 11,188 applicants, as compared with 32,669 acres from 6,399 applicants in 1950.

The 1951 applications are classified as follows:—

<i>Purpose.</i>	<i>Acres.</i>	<i>No. of Applications.</i>
Sago	7,062	1,068
Padi	6,319	1,528
Rubber	8,603	2,323
Coconut	3,720	748
Pepper	†2,150	3,545
Ordinary Agricultural	2,314	528
Coffee	14	8
Fruit	2,705	585
Vegetable	1,229	366
Building	160	331
Miscellaneous	138	104
Cattle Grazing	1,538	54
Total	35,952	11,188

†The low average area per application occurs mainly in the Second Division—comparative figures for pepper in the Divisions are:—Average area per application First Division 2 acres, Second Division $\frac{1}{4}$ acre, Third, Fourth and Fifth Divisions 3 acres.

Applications dealt with.

At the beginning of the year there were 5,117 applications for land outstanding from the previous year and some 11,188 new applications were received during the year 1951.

Applications dealt with amounted to 9,626 and were disposed of as follows :—

(a) Surveyed	...	...	8,292
(b) Already surveyed	...	...	396
(c) Cancelled, etc.	...	...	995
(d) Title without survey	...	...	138

This left arrears of 6,679 applications not dealt with at the end of the year, an increase in arrears of this work of 1,562.

The disposal of 9,626 applications for land during 1951 as compared with 5,965 in 1950 represents a considerable increase of effort on the part of the Department which, in a normal year, would have gone a long way to wiping out arrears. However, the large increase in the number of applications for land received has made the position much worse. The main increases in the demand for land in 1951 over that in 1950 are Sago 379, Padi 140, Rubber 1,052, Pepper 2,461, a total of 4,032 out of the general increase of 5,789. Nearly half the increase is due to the demand for pepper land, in spite of the decision made early in the year to not alienate any further *new* land for pepper growing. The total area applied for in 1951 for this purpose is, however, comparatively small (2,150 acres) and represents mainly applications for old abandoned pepper land, and for those gardens planted up before 30th April, 1951, in anticipation of a title being granted. (Many persons planting after 30th April, 1951, which was the date notified in the promulgated decision, have been prosecuted for illegal occupation of Crown Land, especially in the case of non-natives).

Transactions in alienated land.

Some 8,501 instruments were registered during the year; they comprised :—

Transfers	..	...	...	4,502
Charges	...	...	...	784
Release of Charges	...	...	...	730
Sub-leases	...	...	...	45
Surrenders to the Crown	...	...	...	198

Affidavits	...	...	58
Letters of Administration	...	...	381
Caveats	...	...	244
Miscellaneous (i.e. Deeds of Exchange, etc.)	...	...	748
Powers of Attorney or Revocation	...	...	134
Transmission by Probate in case of small estates	...	...	677

Issue of titles for Crown Land.

Some 4,349 leases were issued during the year for approved applications, making the total number of titles extant at 31st December, 1951, 114,252.

Miscellaneous Surveys and Inspections.

Requests for subdivision of alienated land totalled 483, while miscellaneous inspections of land were 844.

LAND CLASSIFICATION AND DEVELOPMENT AND SETTLEMENT.

Mixed Zones and Native Areas.

Provision is made in the Land (Classification) Ordinance for the declaration of Mixed Zone Land and Native Area Land in order to control non-native colonisation, and also protect native interests in land. During the year the following areas were constituted :—

FIRST DIVISION.

Mixed Zones.

Approximately 720 acres on the true right bank of Sungai Samarahan between Sungai Baharu and Sungai Murut.

Approximately 290 acres on the southern boundary of the Nissa Shokai Estate at Samarahan.

Approximately 1,000 acres at Sungai Empila, Samarahan.

Native Areas.

Approximately 14,000 acres situated to the north of the Simanggang Road between the 11th and 20th Miles.

Approximately 5,500 acres taking in the *cape* formed by the Sarawak and Santubong Rivers and stretching to Kampong Samaring.

Approximately 2.25 acres at Kampong Sungai Bedil Kechil, across river from Kuching.

General.

The present classification of the First Division is to be reviewed in 1952 with a view to providing (a) certain Native Areas and (b) small Mixed Zones.

SECOND DIVISION.

Mixed Zones.

Nil.

Native Areas.

An area of approximately 4,028 acres of the coastal belt between Triso Darat and Maludam.

THIRD DIVISION.

Mixed Zones.

Approximately 2,000 acres at Bawang Assan in the Sibul district.

Two small parcels at Leba'an and Ulu Balingian.

Native Areas.

Three small areas totalling approximately 2 acres.

FOURTH AND FIFTH DIVISIONS.

Mixed Zones.

Three areas totalling approximately 5,432 acres in the Bintulu District.

An area of approximately 1,000 acres at Luak, Miri.

An area of approximately 260 acres at Puyut, Baram.

An area of approximately 435 acres at Ukong in the Limbang District.

Native Areas.

Two areas in the Bintulu District totalling 35,500 acres.

The total areas of each category in the Colony are now approximately :—

Mixed Zones where both natives and non-natives hold land, approximately 4,474 square miles.

Native Areas where only natives can hold land, approximately 272 square miles.

The balance of the area of Sarawak i.e. 42,254 square miles is Interior Area and Native Customary Land, where,

apart from mining and forestry undertakings, the only occupied land is that consisting of farming and other native lands, generally lying away from the main centres of trade and plantation industry. Only general administrative control is exercised over these farming lands.

The administration during the year of the Land (Classification) Ordinance has caused confusion. The complex effects of this legislation when applied to the existing structure of Land Administration were not fully realised by either departmental or legal officers, and it is now apparent that it would have been wiser to limit the ordinance to the simple provisions required to give statutory authority to the establishment of Mixed Zones and Native Areas, rather than attempt to define native customary land *vis-a-vis* general classification by areas. Amending legislation will be placed before the Council Negri; and it is hoped that this will considerably simplify the situation and correct actual faults which occur in the existing ordinance.

Errors have occurred which have resulted in the validity of certain transactions and titles being open to question, and it will be necessary to present a validating bill to Council Negri at the first opportunity.

Settlement Operations.

Owing to the prosperity in the rubber and pepper industries throughout the last two years, the incidence of illegal occupation of native farming lands by non-natives has greatly diminished. The progress of the re-settlement schemes referred to in the report for 1950 will, it is hoped, prevent a recurrence of the squatter problem which was mainly a legacy from the days of enemy occupation. The policy is, and always has been, that every small holder agriculturist shall have secure title to his land on a defined lease for a considerable term of years. In the case of non-natives this can of course only take place in previously selected areas where natives interests do not conflict, or can be extinguished by compensation without reducing the area required by the native communities below that required for present needs and future expansion.

The present position of the large re-settlement scheme in the Lower Rejang delta on which progress was made during the year is as follows:—

Final decisions have been made regarding the classific-

ation into Mixed Zones and Native Areas, and approved by the Governor in Council. Formal gazetting will take place in 1952. All lots in the proposed Mixed Zones have been surveyed ready for issue of title and similar operations are in progress in the proposed Native Areas. The amount paid out as compensation for the extinction of native customary rights in the proposed Mixed Zones amounted to \$10,533 during the year.

This Scheme demanded a considerable amount of survey work and the effort devoted during the year to this one project entailed 1856 miles of prismatic compass lot boundary surveys and 756 miles of the odolite traverses to control the same. The cadastral mapping completed during the year from these surveys amounted to 74 30 inch \times 30 inch charts on a scale of 4 chains to an inch and 8 on a scale of 16 chains to an inch.

Other than the above there have been no schemes for opening up of land on a large scale. Most other alienation was piecemeal, but represented a considerable area in the aggregate.

Operations under the Land Settlement Ordinance.

The preceding paragraphs refer to settlement in the sense of opening up lands for agricultural development by putting small holders on the land, with documentary title, either under the Land Ordinance or the Land Settlement Ordinance.

Deliberate operations under the Land Settlement Ordinance for the settlement of the legal and equitable claims of people already on the land, or having interests therein, took place in 1951 over the following areas:—

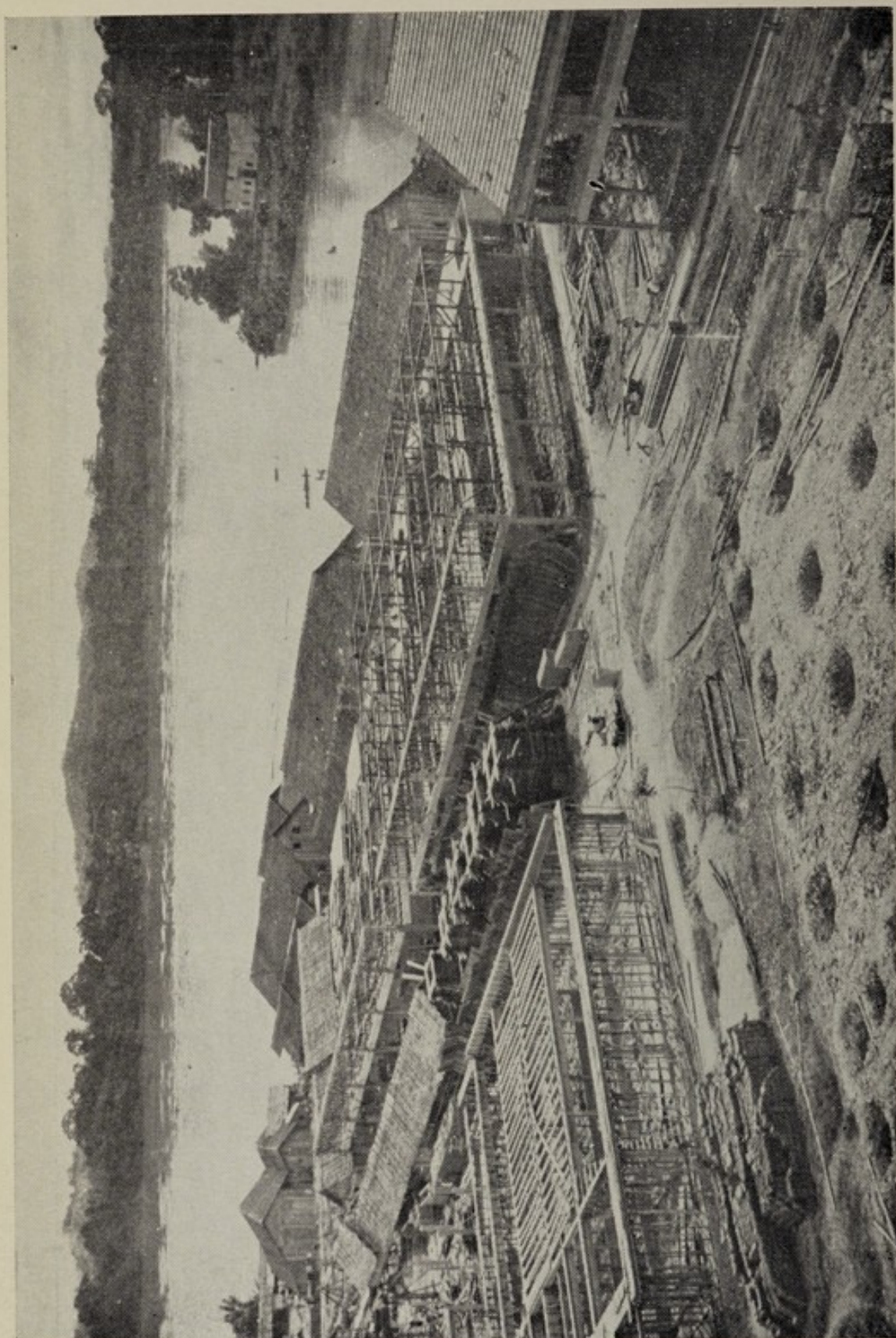
Land District—Kuching Central.

<i>Block No.</i>	<i>No. of Lots.</i>	<i>Area (acres).</i>
46	63	572
59	43	1216
45	37	400
56	35	59
57	159	1044
58	88	848
70	47	1442
71	118	1047
82	132	937
83	147	924
Total	869	8489



[Photographed by Hedda Morrison.]

Sea Dayaks burning hillside prior to padi planting.



[Photographed by Hedda Morrison.]

Reconstruction of Kanowit bazaar.

Rural Land Development.

Since the development of rural areas depends so much on the small holder, it is inevitable that agricultural pursuits are influenced, especially in regard to cash crops, by the current prices for agricultural products, cultivators seek land to plant the crop with the greatest return. This is well illustrated by the demand for land for pepper growing referred to earlier. Efforts to settle small holders on selected land for the purpose of mixed farming, or the direct production of foodstuffs, often end in failure for this reason. The exceptions to this are the very large native communities, especially in the interior, who habitually attempt to grow all their own rice requirements, as well as the currently favoured cash crop, but who, in doing so, use up far more land by customary usage than would be required using a better system of farming. It is inevitable, therefore, that rural development has been to a great extent haphazard in the past, even though the actual alienation of the land is controlled. When there has been a slump in any particular commodity the result has been the abandonment of large areas of small holdings devoted to such crops, in the hope of acquiring fresh land for something else; striking examples are the vast areas of abandoned pepper land at Engkilili and elsewhere. The Land Office is then faced with the task of re-entry and re-possession of the land for non-payment of rent or non-cultivation both of which are cumbrous legal processes, and which in the end, achieve nothing as new tenants cannot be found for the deteriorated land. (It should be noted that it is now the policy of the department to re-enter on land for non-payment of rent only as a last resort after other methods have failed.)

The Natural Resources Ordinance which was enacted in 1949, however, provides very wide powers to control the development and use of land without upsetting the tenure thereof. This encourages stability in agricultural economy. The Natural Resources Board, appointed under the Ordinance, which consists of the Secretary for Native Affairs, the Director of Agriculture, the Director of Lands and Surveys, the Conservator of Forests, and the Director of Geological Surveys as official members, assisted by several non-official members appointed by the Governor, is empowered to issue orders for improvements to be carried out by the small holder with a

view to conserving the fertility of the soil, and considerable success has already been achieved. If given in time, the orders are cheerfully obeyed and the particular garden never reaches a stage of deterioration of the soil. This means that, should the particular crop become unattractive in the market, complete abandonment of the land need not occur. Pepper culture affords the best example of this, and rubber, although a more permanent crop, has possibilities of improvement.

The Agricultural Department is taking vigorous action to improve rural development through the control afforded by the powers of the Natural Resources Board. Consideration is now being given to the introduction of wet padi farming rules to certain selected areas in order to intensify and improve the production of rice, and make full use of the Colony's best land, again without necessarily upsetting the tenure. Another important function of the Board is to protect, and control the use of, the natural resources of Sarawak which are as yet unaffected by land occupation.

Bazaar and Town Development.

At the end of the war in 1945 there were 10 bazaars which had been wholly or partially destroyed by military operations in Sarawak and to these can be added another 4 destroyed accidentally by fire.

New and improved layouts have been designed to replace all the old ones and land office action is complete on all except one, Limbang, which presented complications regarding siting and involves the removal and compensation of a great number of villagers. Action is in hand on this and it is hoped to complete the project during the year 1952.

Rebuilding is complete in 6 of these bazaars using improved materials of a more permanent nature. Until this was done trade was carried on in temporary structures.

In addition, some 34 layouts were made for new bazaars, and replacing old and insanitary bazaars.

Alienation of town and bazaar lots is mostly by public auction. The following sales took place in 1951 :—

	<i>Number sold.</i>	<i>Amount realised.</i>
Shop and Industrial Lots Grade I	23	\$117,850†
Shop and Industrial Lots Grade II	40	119,376
Shop and Industrial Lots Grade III	18	9,934
Shop and Industrial Lots Grade IV	18	7,722
Total	<u>99</u>	<u>\$254,882</u>
Other town lots Grade I (mainly residential)	1	\$3,350
Other town lots Grade II (mainly residential)	8	2,756
Total	<u>9</u>	<u>\$6,106</u>

†Includes a number of shop lots in Sibü which reached the record figure of \$1,000 per foot frontage.

SURVEYS AND MAPPING.

Cadastral Surveys.

The field work for the year 1951 comprised in the alienation of new land, reservation of land, revision surveys, mutations of title, and inspections, etc., consisted of the following totals in all categories of land :—

Country Lands.

Prismatic compass boundary surveys (2,862 miles) 8,140 lots @ \$19.07 per lot.

Theodolite control traverses 331 miles @ \$146.50 per mile.

Town Lands.

Theodolite survey of lots 3,276 chains 275 lots @ \$3.29 per chain and \$39.20 per lot.

Theodolite survey queries, etc., 1,114 chains @ \$2.07 per chain.

Mining licences, etc., 1 lot of approx. 5 square miles costing \$262.

Miscellaneous cadastral surveys and inspections without survey 3,465 lots @ 5.31 per lot.

The cadastral charting on record sheets for the year consisted of the following :—

No. of Theodolite Traverses : Computed for charting 111, Charted, 54.

New Lots charted : 7,727.

Revision charting : 4,290 lots charted.

The arrears of current field work have already been mentioned. Arrears of office work at the end of the year amounted to :—

(a) Theodolite traverses awaiting action :—

For computation	...	...	50
For charting	...	...	99

(b) Lots awaiting charting ... 4,084

The above represents the arrears of normal current work and no progress has been made in appreciably reducing these arrears owing to the increase in current work received. In addition there is the practically untouched work necessary to register claims to land at present occupied by natives without documentary title. (Any non-natives on land without title are included in the recorded arrears of current work).

It is extremely important that the Cadastral Survey be brought up to date as soon as possible, including the 20,000 unsurveyed lots in the Second Division.

Topographical Surveys.

The topographic work carried out during the year by Sarawak resources is tabulated below :—

River Surveys	...	46 miles @ \$24.60 per mile
Compass Traverses	...	52 miles @ \$63.52 per mile
Levelling	...	25 miles @ \$115.25 per mile.

This is generally undertaken as being incidental to other work, or as an interim measure pending plotting of the air photography.

In April, 1951, an expedition to the unexplored country between the Rejang and Baram river systems known vaguely as the Usun Apau was made by the Curator of the Museum and the Director of Lands and Surveys. The route traversed lay entirely in dense forest, and consisted of 60 miles on foot and 26 miles by canoe (constructed by the expedition party when it reached favourable water leading to the Rejang River system). Astronomical observations for latitude and longitude were made at eight points on the route, and much topographical, geological, zoological information was obtained and recorded.

The air photography completed by the Royal Air Force during the year amounted to 31,840 square miles consisting of 24,590 square miles of new coverage and 7,250 square miles of revision. The total area of Sarawak covered by aerial photographs at the end of 1951 was 33,200 square miles i.e. 70%.

Topographical Mapping.

The deliberate mapping as planned, on a regular sheet series from the aerial photography, has not progressed as expected. This is due to the inadequacy of staff and funds to provide topographical ground control and at the same time keep the cadastral survey from falling too much into arrears. The topographical mapping of the Colonial Territories is properly the function of the Directorate of Colonial Surveys under a Colonial Development and Welfare Scheme, but local resources are used to assist.

In the meantime, the demands from departments and officers directly concerned with the development of Sarawak's natural resources have been met by the provision of photostat mosaics. In the coastal swamp areas these mosaics can be used as they are, but in other areas they need the addition of an over drawing by hand to show the drainage pattern and relief, the latter by sketched form lines only.

Some 2,812 square miles of photostat mosaics were prepared during the year 1951 bringing the area available in this type of mapping to 19,500 square miles. The mosaics are compiled from photostat copies of the air photos and follow the layout of the 1/50,000 regular topographical sheet series which is still in course of production, but which, for the reasons stated above, is not yet available.

The work carried out by the central drawing office included the following items of interest :—

Some 1/25,000 sketch maps for the Geological Survey Department.

A map from air photo compilation of a portion of the coast in the Similajau area, Bintulu.

Preliminary map of the Usun Apau territory.

Special road map of Kuching published.

A relief model of Sarawak and Brunei on a horizontal scale of 4 miles to the inch and vertical scale of 4,000 feet to the inch was prepared for the Colombo Exhibition and despatched in January, 1952.

XV

Science and the Arts.

The Museum during 1951.

The Sarawak Museum established by the second Rajah Brooke in 1886 has grown into a fine mixed museum, having the best collection of Borneo arts and crafts to be found anywhere. It is the only museum in the island of Borneo. Situated in beautiful grounds in the centre of Kuching, it is a great attraction both to tourists and local institutions. Of the approximately 75,000 visitors during 1951 about a quarter were Dayaks, a third Malays, a third Chinese and the rest European and other races. School children accompanied by their teachers visit in increasing numbers. The two great stuffed Orang-utans, the snakes, the big whale skeleton and the human heads interest the young, while the photographs of Kuching in the past and the crafts collections attract the older visitors.

The lack of exhibits of Clouded Leopards and Honey Bears, noted in the 1950 report, is now well on its way to being remedied. A pair of Honey Bears was placed on exhibit during the year, though not yet against a scenic background and a whole family of Clouded Leopards has been prepared for display. All this material was obtained during an expedition to the Kelabit country in the headwaters of the Baram.

The 1950 report also mentioned the absence of a Rhinoceros exhibit. Through the good offices of the Conservator of Forests, most of the remains of a very large Rhinoceros, illegally shot by Dayaks during the year, have been received in the Museum. It will probably not be possible to re-constitute this as a complete specimen, but at least a remarkable horn will be available for display.

Research during the Year.

Through, or in conjunction with, the Museum four main types of research have been carried on during 1951 :—

- (1) Anthropological;
- (2) Historical;
- (3) Archaeological.
- (4) Zoological.

Considerable progress was made with all of these, particularly the anthropological and zoological research. But the gaps in the scientific knowledge of Borneo are really tremendous, when compared with the data available for other parts of South East Asia where there have been long-established research institutions—as for instance in Indonesia, Malaya, Indo-China and the Philippines. It is no exaggeration to say that the large gaps in knowledge about Borneo continually obstruct specialised or scholarly attempts to complete scientific theories throughout South East Asia generally. On the other hand, for this very reason, almost any research undertaken in Borneo generally, and in Sarawak in particular, produces exciting new results; results which sometimes may profoundly influence or alter previous existing theory.

Thus, researches during 1951 alone have suggested that previous belief about the migration of stone-age peoples in this part of the world may have to be very much modified; that the factors influencing and specialising the fauna above 3,000 feet have been too confidently generalised, from observation in other and generally less mountains countries; and that the widely accepted theory of successive human economic development from nomad food gatherers through shifting cultivation to settled irrigation is probably due for an upset, at least so far as the Sarawak evidence goes.

Anthropological Research.

The activities of the Museum are largely focussed on anthropological and ethnological aspects of the country, which offer fascinating potentialities in the human field. The principal lines of anthropological research have been three in number :

- (1) The Kelabits of the far interior.
- (2) Group contacts and conflicts.
- (3) Native legend, with particular relation to migrations and geography.

(1) *The Kelabits of the far interior.*

This study, which was commenced in 1945 and has been carried on each year for periods varying between two and nine months of the year, was entirely continued during 1951. It is intended to carry on the survey for a number of years. The social life, individual behaviour, group and personal belief of Kelabit people living in long-houses in the uplands of the far interior have been studied in the most intimate detail, three persons usually being employed in collecting data under the Curator's general direction. It is hoped in due course to produce a series of monographs not only describing the social anthropology of these remote people, who still have an active megalithic culture, but also giving detailed life histories for about one hundred individuals, some of them old men when the survey started, others born during the course of the survey. It is believed that (if successfully continued) this may be one of the closest studies of an Asian community yet undertaken.

(2) *Group contacts and conflicts.*

In Borneo the movements of expanding groups, such as the Land and Sea Dayaks, have dominated the cultural and economic development of the island for many centuries. Some groups have been overwhelmed or absorbed. Other smaller groups have by various means actually taken over power and control from much larger groups. The series of studies in this field aim to measure this process with particular reference to the extinction of groups and the numerical decline of a number of major units. As well as research undertaken through the Museum, it is anticipated that much use will be made of the field studies begun in 1947 and continued in 1951 by four anthropologists from the London School of Economics (each studied one particular group).

(3) *Native legend with particular relation to migration and geography.*

The Museum Research Assistant spends about a half of each year recording legends in the original native text. This work is done to plan, and will eventually cover Sarawak as a whole. It is being found that this legendary material contains an enormous amount of *fact*, particularly in relation to the origins and movements of people (not only within Borneo but from other areas). In several cases, it has been possible

to check the reality of legends relating to a homeland of the far interior of the Rejang River by means of an exploration of this area undertaken by the Museum staff during the year—during which unquestionable archaeological proof of the reality of legendary statements was obtained. But apart from this, the material itself is of interest, especially from an anthropological point of view. A particular study has been made of legends on petrification, which play a large part in Borneo mythology, and among certain groups amount to an obsession.

Socio-economic survey of the Malay Community.

In addition to the above continuing researches plans were prepared during the year for a survey of the Malay community, which was not covered in the previous socio-economic survey, planned by Dr. E. R. Leach and conducted by four graduates. Approval for this scheme has now been received and a grant made from the Colonial Development and Welfare Fund. It will be a major project for 1952.

Historical Research.

This overlaps with a section of the anthropological research referred to above, as indeed all aspects of human study overlap if pursued to their logical limits. This work depends on the Archives Section of the Museum which was established in 1949 and has continued during 1951 to expand with the accumulation of important documents as well as the day to day recording of current literature and events (including records obtained by photography, through the Museum Photographic Unit).

During the year a study was completed of the relations between the first two White pioneers of Sarawak, Sir James Brooke and Mr. Robert Burns, a grandson of the poet. Both were in search of antimony. One reason why Kuching was the centre of early settlement and became the capital of the country was because of the antimony mine, long ago located at Bau and now defunct. Burns made remarkable journeys into the Upper Baram and Rejang, which were not subsequently visited by any other white man for many years. He came into direct conflict with Brooke as a dangerous rival and was defeated in the subsequent contest of diplomacy. He eventually lost his life and his head at the hands of the pirates off the coast of North Borneo. This study will be published shortly in the Sarawak Museum Journal.

Another study, nearly completed during the year, traces the attitude of the first two Rajah Brookes to the court of Queen Victoria, and their official and unofficial negotiations for social recognition. These include some fascinating documents. During the year Miss Emily Hann, the well-known biographer of Sir Stamford Raffles, visited Sarawak to prepare "A life of Sir James Brooke." She spent some time in the Archives and Reference Library Sections in the Museum; all possible assistance was given to her.

It is anticipated that in the future this type of research activity will be considerably increased. There is an urgent need for histories of Sarawak. The plural is deliberately used. No single history could include the complexity of races of migrations of Chinese, Javanese and Malay contacts, Dayak expansion, Kelabit specialisation, and the detailed intricacies of Brooke evolution. But the practical approach in Sarawak is to make special research studies of special periods or groups, gradually linking them together. Moreover, there is need to educate different racial groups into their own group histories, and in their own languages.

Archaeological Research.

The programme of archaeological research outlined in the 1950 report was less actively continued during 1951, although its intensification had been anticipated. This was mainly owing to the increase in labour costs. During 1951, therefore, attention was centred on reconnaissance work in other areas, including a general reconnaissance of the Sarawak River Delta carried out in conjunction with Dr. Schuyler Cammann, Curator of the University Museum, University of Pennsylvania. The knowledge so gained will be of material assistance in 1952. Much attention was also paid to the collection of stone implements and over a hundred of these were obtained. A preliminary analysis of some of these was prepared by the Curator and published in *MAN*, the Journal of the Royal Anthropological Institute for February, 1951. This paper raises questions of considerable interest in the anthropological field, and the concluding paragraph is quoted here to indicate the general conclusion:

"It seems probable that apparently logical sequences of cultural typology have so far been too closely drawn in South-East Asia, and that more study data are required

before it is safe—or even wisely suggestive—to erect such sequences upon simple material criteria. The group of 126 specimens here considered in itself raises many question marks. No doubt others remain to be raised. One is, of course, the antiquity of this group. For instance, this material could suggest that in Borneo different 'neolithics' existed side by side, just as today the Kelabits of the interior and the Europeans of the coast live material poles apart within one 'iron age'."

In December one of the Museum staff returned after a year's training in archaeology in London, first at the Cambridge Museum of Ethnology and Archaeology and then under Prof. V. Gordon Childe at the Institute of Archaeology, University of London, where he passed out with high credit. His return will facilitate the conduct of archaeological work in the Colony; the same organisation support the urgency of archaeological research as apply to historical research. In some ways archaeological research is even more urgent. For whereas an effective organisation for keeping the archives is now in existence, there is not yet even effective legislation, let alone *action* to control the destruction of archaeological sites for all time.

During the year, concern was felt at the increased rate of extraction of guano fertilizer from the Niah and Bau caves, affecting some important ancient burials. The Curator made a month's trip overland visiting the Mulu and Niah caves during December and as a result submitted a report which it is hoped, may lead to some constructive measures before it is too late.

Zoology.

Research in the zoology field was concentrated on four particular sections—mammals, birds, turtles, and the Giant African Snail; it is very difficult in Sarawak to cover the whole wide field of zoology satisfactorily with existing facilities. Where available personnel have expert knowledge and there are trained native collectors, considerable progress was made during the year 1951, e.g. with mammals and birds, in adding to the general collections of the Museum and in illuminating special problems. Some aspects of this work may be briefly considered in turn.

Mammals and Scrub Typhus.

Throughout the year systematic collections were made by trapping in the Kuching area, with occasional expeditions elsewhere, on behalf of the Scrub Typhus Research Unit at Kuala Lumpur, Malaya. One of the Museum collectors did a course of training with that unit and specialised in collecting the typhus-carrying mites from rats, squirrels, tree-shrews and other mammals. Reports to date, from Kuala Lumpur, indicate that the results have added a good deal to existing knowledge and filled in a gap left between the unit's own investigations in Malaya and in North Borneo.

At the same time, a large collection of mammal skins has been accumulated, both through the scrub typhus work and by collectors generally, as part of a scheme in conjunction with the Field Museum of Natural History at Chicago, designed to build up a complete picture of the mammal fauna of Borneo. The Chicago Museum sent its own expedition into the field in North Borneo and the Sarawak Museum has provided comparable material from this territory. When the whole material has been systematically studied and described, it will be shared between the Chicago Museum and the Sarawak Museum.

Ornithological Studies.

In much the same way, bird collecting has been carried out systematically in the Kuching district throughout the year, nearly 2,000 specimens being obtained. This is part of a scheme largely made possible through the interest and support of Mr. Loke Wan Tho, himself an ornithologist and expert photographer. The plan is to train native collectors from all over Sarawak so that they can collect systematically in their own areas, bringing down their collections to the nearest District Officer from time to time. Already, 2 Kelabits, 2 Muruts, 2 Kenyahs, 2 Berawans, 2 Land Dayaks and 1 Kayan, have been trained and sent home, and their collections should start coming in during 1952. This will provide material of the first importance for systematic study of the bird fauna of Borneo, with special reference to geographical variation, and on an orderly scale perhaps not attempted previously anywhere in this part of the world.

Dr. Ernst Mayr has agreed to supervise the working out of the material in comparison with other areas, at the American Museum of Natural History. The material will

then be shared between the American Museum of Natural History and the Sarawak Museum on the usual basis of such sharing between Museums where the joint work of each is recognised—one in undertaking the collecting and the other in undertaking the arranging and identifying of the collection. It would be beyond the resources of the Sarawak Museum itself to work through such large collections in any one field owing to lack of man-hours and lack of comparative material from other countries since this Museum's collections are confined to Borneo.

In addition to this general ornithological survey, special studies have continued on the habits of Edible Bird's Nest Swifts (*Collocalia*); and into the feeding habits of birds of economic importance such as Munias and Pigeons. The Edible Swifts produce nests which are economically important and it is believed that research may indicate methods of increasing the yield of nests by more systematic methods of collecting and handling. As regards the food habits of economic birds, in some areas as much as 50% of the rice crop may be taken by birds during "bad" years, and an undertaking of the factors which control epidemics of certain birds, and sudden mass migrations, great economic significance. No special funds are provided for any such research, but it is conducted as and when possible, within the general pattern of the systematic studies already mentioned.

Turtles.

As mentioned in the 1950 report the turtle industry was reorganised during that year, and experiments undertaken to conserve the species, to improve the hatch of eggs, and to study methods of rearing young turtles so that these can be put into the sea in such a condition as to resist the attacks of sharks and other fish which normally take the majority of them in the first few minutes of their lives.

The yield of eggs was not so good as in 1950, but even so, \$15,000.00 profit was handed over for Muslim charities through the Turtle Trust. The factors which influence year to year fluctuations in the numbers of turtles laying are not yet understood. General knowledge about this very important economic animal is extraordinarily small, although it is distributed in warm seas right round the world. Active research on these factors was therefore continued during the year. During the latter part of the year Professor R. Denison

Purchon, Professor of Zoology, University of Malaya, visited the islands with the Curator, to investigate the possibilities of his department co-operating in such research. As a result it is hoped that during 1952 a senior graduate from the University of Malaya may be available to spend some time co-operating in this activity.

At the end of the year, new legislation was enacted to strengthen the previous act, controlling the industry. There is now established a Turtle Board of Management, of which the Development Secretary is Chairman and the Curator of the Sarawak Museum is Executive Officer. This should facilitate the organisation of further development in future years.

The Curator, in search of still wider co-operation, wrote a letter dated August 30th, 1951, to the international scientific journal, *Nature*. This letter gave general information about the whole industry, and is quoted below:—

“ The scanty literature on the green or edible turtle, *Chelonia mydas*, as reviewed by Ingle and Smith¹, agrees in allocating a definite breeding season (in no case more than six months) to this species, varying from April-August in the West Indies to October-February in Queensland.

The significance of monthly figures from three islands off the Sarawak (Borneo) coast summarized by Banks² appears to have been overlooked, perhaps because they were derived from Malay collectors and contain some noticeable contradictions (for example, totals on pp. 527 and 530 of ref. 2). Since 1947, accurate figures have been kept from these three islands, now no longer controlled by the Malay chieftains but through the Curator, Sarawak Museum. There can be no question that green turtles do breed in every month of the year on each island; a permanent staff collects eggs nightly. Adults are never killed. Figures for 1950 (including eggs replanted for hatching) are reasonably typical. The 1950 total of 2,357,644 eggs recorded was distributed as in the accompanying table.

¹Ingle, Robert M., and Smith, F. G. Walton, “Sea Turtles and the Turtle Industry of the West Indies, Florida, and the Gulf of Mexico; with Annotated Bibliography” (Univ. Miami Pub., 1948).

²Banks, E., *Sarawak Mus. J.*, 4, No. 15 (1937).

<i>Month.</i>	<i>No. of eggs.</i>	<i>Month.</i>	<i>No. of eggs.</i>
January	24,264	July	495,191
February	26,205	August	503,688
March	42,798	September	370,626
April	75,247	October	194,228
May	171,510	November	90,122
June	315,533	December	48,232

Despite a definite 'summer' peak, 12 per cent of the eggs were laid in the six full monsoon months (November-April), which in 1950 was often severe, making it very difficult for the turtles to get ashore on the three tiny (total six acres) beaches. On only one night (December 12) in the year did no turtle come ashore and lay.

This situation raises points of general interest in connexion with breeding cycles, and is being further studied. It is, however, possible that it is not peculiar to this area. Careful studies of this economically important and readily observed species are exceedingly meagre. Even the fullest study, that of Moorhouse³ on the Great Barrier Reef, only covers five months (1929-30) and takes much for granted. For example, referring to statements by previous writers that incubation takes six to eight weeks, he concludes (ref. 3, p. 10) that "the present investigations have proved this a fallacy"—because his observations gave 65-72 days. But he only studied eleven nests. In Sarawak, the longest incubation period recorded so far is 65 days, the shortest 50. Ninety clutches laid in the height of the 1950 season (August) averaged 52 days.

In the monsoon, hatching is on the average slower. There are interesting possibilities for comparative work over the enormous range of this common (though decreasing) species, the habits of which lend themselves to exact observation and statistical checking. We here would welcome any research co-operation or co-ordination.

As a result of this letter, correspondence was received from other countries, including valuable suggestions and offers of active help from the New York Zoological Society, through its Curator, Dr. James A. Oliver.

³Moorhouse, F. W., "Reports of the Great Barrier Reef Committee", 4, Pt. 1 (1933).

Blood Groups.

Mention may also be made here of research into blood groupings, a subject both of anthropological interest and of medical importance. During the year, a paper was prepared on blood grouping material obtained by Dr. J. Clapham and Dr. E. H. Wallace of the Medical Department and worked out in Australia; this was correlated with ethnological material provided from the Museum. A long joint paper will shortly be published.

In addition Lt. P. H. A. Sneath, of the Pathology Laboratory, British Military Hospital, Singapore, visited Kuching to carry out blood group sampling during 1951, in conjunction with the Medical Department and the Museum which were able to provide him with considerable facilities. He concentrated on a small group of Land Dayaks in a more detailed study than that previously described.

Native Arts.

During the year, attention was paid to the problem of the decline in native arts, a decline recently accelerated by the boom in rubber.

Efforts have been made therefore to encourage craftsmen, such as the man who made the beautiful bamboo pipes in the Land Davak country and the wonderful wood carvers of the Tinjar River. This encouragement was usefully focused on supplying material for the Festival of Britain Exhibition and specially in strengthening the Sarawak exhibits in the Imperial Institute.

There is no doubt that Sarawak has some of the finest of arts and crafts, particularly in the fields of wood carving (Kenyah), weaving (Iban and Land Davak), basketry (Melanau, Land Dayak, Kedavan), bamboo decorating (Kelabit, and Land Davak), beadwork (Kenyah-Kayan), swords (Kenyah and latterly Punan) and the ever fascinating blowpipe (Punan). Unfortunately, *all* these crafts are steadily declining, especially the finer types of workmanship.

Ceramic Arts.

Many visitors are impressed by the number and quality of ceramic objects to be found in long-houses even far in the interior. The Museum is concerned with its collection in this section which was enlarged during 1951. This china and

pottery is nearly all of Chinese or Siamese origin and was traded into Borneo as early as the Tang Dynasty. It must have come in vast quantities to be exchanged for hornbill ivory, spice, gum, gold and rottan.

At present, facilities for exhibiting ceramics in the Museum are inadequate and a large part of the collection (mostly acquired in the last five years) is temporarily housed as reference collection in store. It is hoped that this deficiency may be overcome before long.

The Arts of Brunei.

Brunei has long been an art and culture centre for the whole of Borneo. Its arts and crafts, considerably influenced by Chinese and other cultures, in the past, produced magnificent objects in gold and bronze and latterly silver. During the early part of this century, the standards gravely declined; but in recent years there has been an encouraging improvement, and it is now hoped that within the next few years there will not only be a special Brunei gallery at Kuching but also a separate museum unit, associated and cared for through the Sarawak Museum, in Brunei itself.

Research has also continued into the translation of important Brunei manuscripts, and it is hoped to link this up with parallel research on the Chinese relevant to Brunei through the visit of Dr. Schuyler Cammann, who went to Brunei in this connection as well as spending some time in Sarawak.

Meanwhile the Brunei Government has given generous support to the Sarawak Museum to encourage research into Brunei arts and crafts and the acquisition of fine specimens.

XVI

Geography and Climate.

General description.

The Colony of Sarawak consists of a coastal strip some 450 miles long and varying from 40 to 120 miles in depth on the north-west coast of the island of Borneo, and has an area of some 47,000 square miles.

A broken range of mountains runs south-west through the middle of the island. This range, with others parallel and at right angles to it, determines the courses of the many rivers.

Sarawak lies between this range and the sea, on its north-west side. The southern border, with West Borneo, is formed by another range of mountains running westerly from about the centre of the main range.

In general, the country is divided into three main types. Firstly, an alluvial and swampy coastal plain in which isolated mountains and mountain groups rise to 2,000 feet or more, then rolling country of yellow sandy clay intersected by ranges of mountains and finally a mountainous area in the interior.

The coast is generally flat and low-lying with heavy vegetation and flat sandy or mud beaches. In a few places, hills come down to the sea forming coastal cliffs.

Most of the mountains are sandstone, but there are extrusions of limestone appearing as low pinnacles 10-15 feet high, or as hills, with sheer sides, weathered and crumbling, rising up to 1,500 feet, with scrub on top.

Vegetation on the mountains is generally virgin forest, except near the main rivers where the forest has been cleared for rice cultivation and secondary growth has sprung up.

The greater part of the country is under forest, with areas of rubber or sago plantations in the neighbourhood of government stations and along the numerous rivers and of coconuts along the coast.

The few islands off the coast are small and of little importance. Roads are few, and travel is mainly by sea and river. The climate is warm and humid, day temperatures averaging 85°F. Annual rainfall varies from 100 to 200 inches.

Geology.

Sarawak occupies an important position in the chain of islands lying off the coast of South-East Asia. Mountains form the hinterland of the country and consist largely of ancient rocks; these highlands are essentially a prolongation of the Philippine ranges, which continue southwards into northern Borneo, swing gradually south-westwards after entering Sarawak, and then trend west before gradually curving northwest. In the extreme west of the country there is a sudden change in this trend and structures strike north or north-northeast in common with the Malayan regional strike.

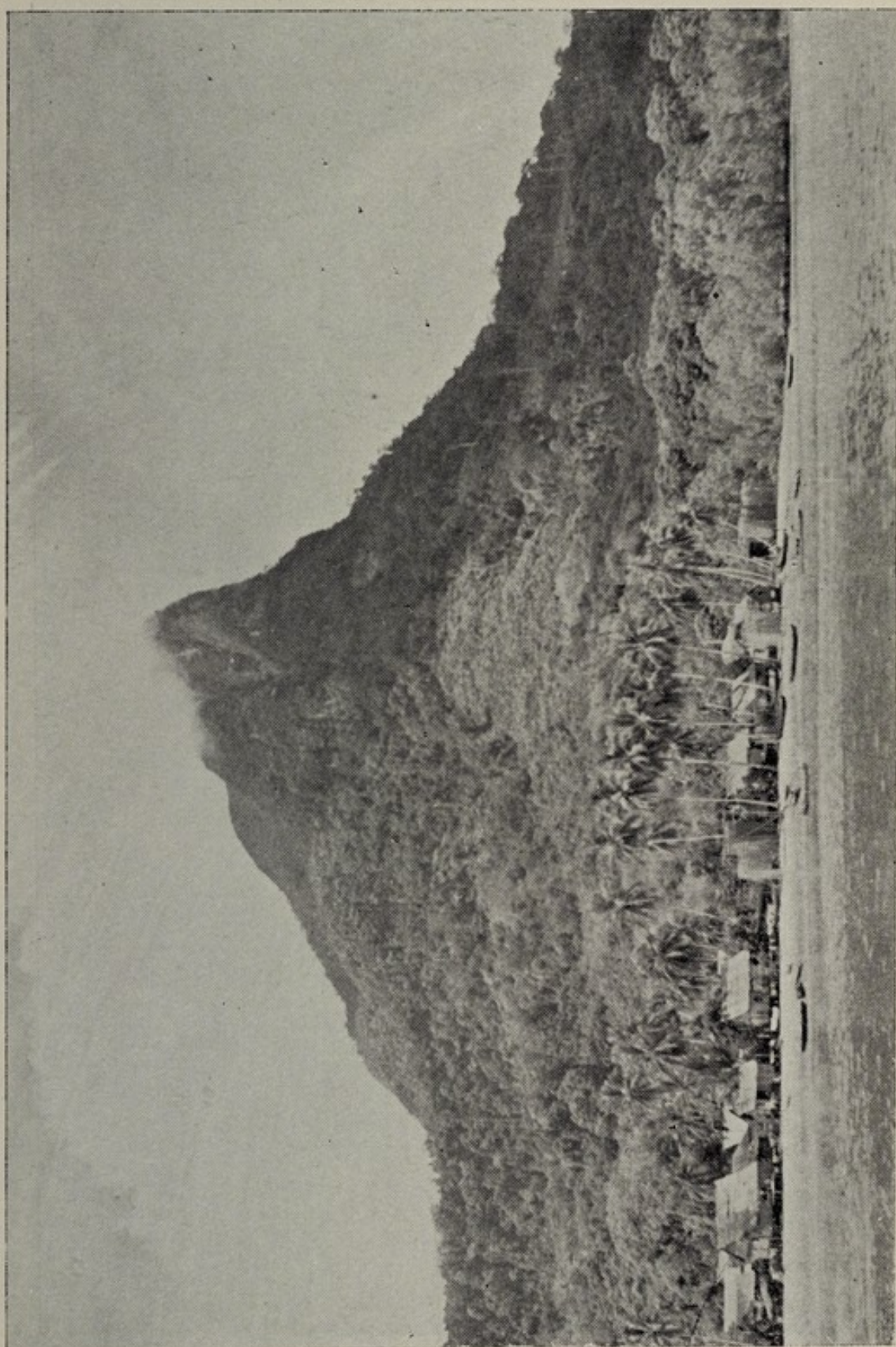
The territory can be subdivided into three main geological areas; the influence of the different rock types in these areas is shown in that they also form the three geographical divisions of, interior mountains, bordering undulating country containing isolated mountain groups, and low-lying coastal tracts.

The mountainous area is formed largely of ancient Upper Palaeozoic and Mesozoic rocks. It consists mainly of hard, crystalline rocks, comprising shale, schist, phyllites, hornstone, chert, marble, limestone, and quartzite; igneous intrusions are common in some districts.

The undulating country, which rises occasionally to over 2,000 feet, consists mainly of Tertiary sediments. These comprise sandstone, shale, grit, conglomerate and limestone; seams of coal occur, and oil reservoirs in British Borneo have to date only been found in such formations. The Tertiary sediments are economically the country's most important deposits, being the source of both the oil and coal.

The low-lying coastal tracts are formed from Pleistocene and recent deposits: these areas are mostly occupied by alluvium and many of them are swampy. The sediments vary from soft mud and peat, to unconsolidated sands, and rare shell banks. Raised beaches are found in some areas, even at a distance from the coast, and there are isolated patches of recent sediment inland representing marine, river, and lake accumulation.

Igneous rocks comprising intrusions of granite and diorite are common in west Sarawak, and there is also some gabbro. Dykes, sills, and plugs, mainly of quartz porphyry, andesite,



[G.S.I.S. photograph.]

A view of Santubong mountain, near Kuching, which is 2658 feet high.



[Straits Times photograph.]

Posed photograph of a Sea Dayak girl whose home is in the upper Rejang.

and less commonly dolerite, have been recorded while lava, tuff, agglomerate, and basalt also occur at a number of localities. These are most commonly found associated with Mesozoic sedimentary rocks. The formation of metalliferous mineral deposits, such as gold, antimony, and mercury, appears to be genetically related to the igneous intrusions. Recent work in the Bau district has shown that the igneous intrusions there often contain small amounts of gold.

Vegetation.

Moss forest occurs on the tops of hills over 4,500 feet, that is, on the peaks in the north-east area, such as Dulit and Mulu.

Tropical rain forest, with trees of the hill varieties (as distinct from swamp varieties), covers the greater part of the territory, except for the swamp areas near the coast and the cultivated areas.

Mangrove occurs extensively near the mouths of the Sarawak and Rejang Rivers.

Nipah palm lines the banks of most rivers from the mouths up to the edge of the swampy area.

Rivers.

The drainage system is controlled by the border range, and the central secondary range, both running NE-SW, decreasing in elevation, and by the ridges at right-angles to these two.

The Rejang and Sarawak Rivers are navigable by ocean-going ships for 170 and 22 miles respectively measured along the rivers. Others are navigable by coastal steamers, and others by launches. Most of the rivers have shallow bars which limit the size of vessels entering.

In their lower courses the banks and bottoms of the rivers are generally of a stiff, glutinous mud. For varying distances from the mouths the river-bank vegetation is usually mangrove, and farther up nipah. As the coastal swamps are left behind, the river banks rise above the normal high water level, and in the Trusan, Limbang, Baram and Rejang Rivers, gorges and dangerous rapids occur well below the sources.

Climate and Meteorological.

The season October to March is, in general, the season of heavy rains, strong winds and high seas, with occasional periods of calm. It is the season of the north-east monsoon. Except for a transitional month at each end, the remainder of the year has less rainfall, with occasional droughts lasting up to three weeks, and with clear skies.

Annual rainfall varies from under 100 inches near the coast away from mountains to over 200 inches inland in the neighbourhood of mountains. In the coastal area from Miri to Labuan most of the rainfall is between midnight and dawn. The year's rainfall at Kuching was 157.26 inches. The maximum monthly rainfall was 18.45 inches in October and the minimum 8.30 inches in June. The effect of rainfall is most felt in the head-waters of the rivers, where the rivers may rise by as much as 50 feet above their normal level.

Prevailing winds are from the north and north-east in the season October-March, the wet season, when there is generally a swell from the north-east, and from the south-west for the remainder of the year. The worst storms are usually in December and March.

Principal Towns.

Kuching, the capital of Sarawak, stands on the Sarawak river some 18 miles from the sea. It is an attractively laid out town with a population estimated at approximately 38,000. The trading community is almost entirely composed of Chinese who live in the town proper, which is built of brick usually plastered and colour-washed and with roofs of tile. Within the town limits are large Malay villages or suburbs. The Governor's residence is the Astana on the north (left) bank of the river and there also may be found Fort Margherita, the headquarters of the Sarawak Constabulary, large Malay riverside *kampongs* and several residential bungalows.

The town, the main Government offices, the Anglican and Roman Catholic Cathedrals and Schools, the wharves, warehouses and dockyard are on the south bank of the river. The town area is administered by a Municipal Board.

Sibu, the second town of Sarawak, is situated some 80 miles up the Rejang river and is a natural river anchorage. The town itself, together with Government offices, bazaar,

churches, schools, wharves and warehouses, lies on a small flat island and is subject at times to floods. The population of the town of Sibu is approximately 10,000 and it is the headquarters of the Resident of the Third Division.

Miri, the headquarters of the Resident of the Fourth Division, is situated on the coast some 15 miles from the mouth of the Baram river and to the south-west of that river. Miri owes its existence to the Sarawak Oilfields and has a population of approximately 9,000. It suffered severe damage as a result of the war, the town proper being almost entirely destroyed, but its reconstruction is now far advanced. The bazaar, wharves, hospital and oil company offices lie along the narrow flat strip of land between the sea and the steep slopes about $1\frac{1}{2}$ miles inland. The Government residential area is at Tanjong Lobang, some 2 miles from the town.

Other centres of population are Limbang (headquarters of the Fifth Division), Simanggang (headquarters of the Second Division), Sarikei, Binatang, Mukah and Bintulu. All are small settlements of a few thousand persons, together with the usual bazaar, Government offices and quarters, and wharfage facilities.

XVII

History of Sarawak.

Owing to the lack of systematic archaeological investigation, we can do little more than conjecture as to the early history of the country now called Sarawak. Hindu figures and gold ornaments have been found, predominantly in the Sarawak River basin, but their date and provenance have not yet been satisfactorily established. The Land Dayaks of the First Division, by their abstention from the flesh of cattle and by the name of their god Jewata (Hindu *deva*), show that at one time they were brought into intimate contact with the Hindus.

A priori reasoning, coupled with the discovery of undoubtedly early Hindu remains in other parts of Borneo, suggests that Sarawak was visited, and probably settled in, by the Indian colonists, who from the early years of the Christian era went forth from their homeland to trade and settle in the countries to the south-east.

Gold has long been worked in the area extending from Kuching south-westward to Sambas and Montrado in West Borneo. Though the production of this area is insignificant in comparison with the present-day total world output, it must, if Borneo gold was known in the days of the great Indian trading expeditions, have been of considerable importance in the ancient world. The fabulous "Golden Chersonese" may well have included western Borneo and indeed a theory has recently been advanced that *Yavadvipa* (the "land of gold and silver" of the Ramayana), Ptolemy's *Iabadiou*, and *Ye-po-ti*, which was visited by the Chinese Buddhist monk Fa-Hien on his return from India to China in 413-414 A.D., all refer to the country lying between Kuching and Sambas.

It is likely that Sarawak later fell under the sway of the great maritime empire of Srivijaya, the Indian Buddhist thalassocracy centred on southern Sumatra, which reached its zenith towards the end of the twelfth century. Srivijaya fell about a century later before the attacks of Siam and the Hindu-Javanese kingdom of Majapahit, and Borneo fell within

the sphere of influence of the latter. It is to this period that a considerable number of the Indian remains in Sarawak are doubtless to be dated. The Majapahit empire in its turn began to crumble early in the fifteenth century before the Moslem states established by the advance of Islam into the archipelago.

After the fall of Majapahit Sarawak formed part of the dominions of the Malay Sultan of Brunei, and it is first known to us by name through the visits to Brunei of Pigafetta in 1521, of Jorge de Menezes in 1526 and of Gonsalvo Pereira in 1530, and by an early map of the East Indies by Mercator. Sarawak was then the name of a town on the river of the same name, doubtless occupying much the same position as the present capital, Kuching.

The history of Sarawak as an integral State begins with the first landing in August, 1839, of James Brooke. At that time Sarawak was the southern province of the Brunei Sultanate. The oppression of the Sultan's viceroy, Makota, had goaded into revolt the Malays and Land Dayaks resident in the area known as Sarawak Proper, and the Sultan had sent his uncle, the Rajah Muda Hassim, to pacify the country. The insurgents were led by Datu Patinggi Ali. James Brooke departed after a short stay and returned in 1840, to find the fighting still in progress. At the request of Rajah Muda Hassim, he interceded in the dispute, brought about a settlement and was rewarded for his services by being installed on the 24th September, 1841, as Rajah of the territory from Cape Datu to the Samarahan River. This, however, is but a small part of the total area which was later contained within the State of Sarawak.

Thereafter for the remaining twenty-three years of his life Rajah Brooke devoted himself to the suppression of piracy and head-hunting, often with the assistance of ships of the Royal Navy, which performed almost incredible feats of navigation and endurance. It is a story of high adventure, financial difficulty, political persecution at home by the Radical party, followed by complete vindication and success. Sarawak was recognised as an independent State by the United States of America in 1850, and Great Britain granted recognition in effect by appointing a British Consul in 1864. In 1861 the territory of Sarawak was enlarged by the Sultan's cession of all rivers and lands from the Sadong River to Kidurong Point.

Sir James Brooke, at his death in 1868, bequeathed to his nephew and successor, Charles Brooke, a country paternally governed, with a solid foundation of mutual trust and affection between ruler and ruled.

The first Rajah pioneered, subdued and pacified; Sir Charles Brooke, in a long reign of fifty years, built upon the foundations laid by his uncle with such conspicuous success that piracy disappeared, head-hunting was greatly reduced and the prosperity of the country increased by leaps and bounds.

Further large accretions of territory occurred in 1882, when the frontier was advanced beyond the Baram River, in 1885, when the valley of the Trusan River was ceded, and in 1890, when the Limbang River was annexed at the request of the inhabitants. In 1905 the Lawas River area was purchased from the British North Borneo Company with the consent of the British Government. British protection was accorded to Sarawak in 1888.

Between 1870 and 1917 the revenue rose from \$122,842 to \$1,705,292 and the expenditure from \$126,161 to \$1,359,746. The public debt was wiped out and a considerable surplus was built up. In 1870 imports were valued at \$1,494,241 and exports at \$1,328,963. In 1917 imports totalled \$4,999,320 and exports \$6,283,071. Roads had been constructed, piped water supplies laid down and a dry dock opened in Kuching. There were telephones, and the wireless telegraph was opened to international traffic.

The third Rajah, Sir Charles Vyner Brooke, succeeded his father in 1917, and progress continued in all spheres. Head-hunting, as a result of tireless efforts, was reduced to sporadic proportions, revenue increased, enhanced expenditure resulted in improved medical and educational services, and in 1941, the centenary year of Brooke rule, the State was in a sound economic position with a large sum of money in reserve. As a centenary gesture, the Rajah enacted a new constitution, which abrogated his absolute powers and set the feet of his people on the first stage of the road to democratic self-government.

Then came the Japanese invasion and occupation. Social services and communications were neglected; education ceased to exist; health precautions were ignored; sickness and malnutrition spread throughout the State. The people had

been reduced to poverty and misery when, after the unconditional surrender of Japan, the Australian forces entered Kuching on the 11th September, 1945.

For seven months Sarawak was administered by a British Military Administration, as a result of whose efforts supplies of essential commodities were distributed, the constabulary reformed and the medical and educational services reorganised.

The Rajah resumed the administration of the State on the 15th April, 1946. It had, however, for some time been evident to him that greater resources and more technical and scientific experience were needed to restore to Sarawak even a semblance of her former prosperity. He therefore decided that the time had come to hand the country over to the care of the British Crown, and a Bill to this effect was introduced into the Council Negri in May, 1946, and passed by a small majority. By an Order-in-Council the State became a British Colony on the 1st July, 1946.

XVIII

Flora and Fauna.

The island of Borneo has one of the richest collections of animals and plants in the world. The outstanding characteristic of the world's third largest island, in this connection, are two in number. The first is that it is in very large part mountainous. Although there are no great mountains, there are innumerable peaks and ranges over 3,000 feet, which intersect and intermingle to form a great tangled chaos over the whole interior. Secondly, Borneo is one of the least densely populated tropical areas in the world. In Sarawak, vast tracts are uninhabited. For instance, in 1951, an exploration party travelled from the last village in the Baram River over previously unmapped and unexplored country for 26 days before they reached the first long-house in the Rejang River above Belaga.

These two characteristics, great areas of mountains and of virgin jungle, give Borneo in general, and Sarawak in particular, a rich share in the fauna and flora of South East Asia.

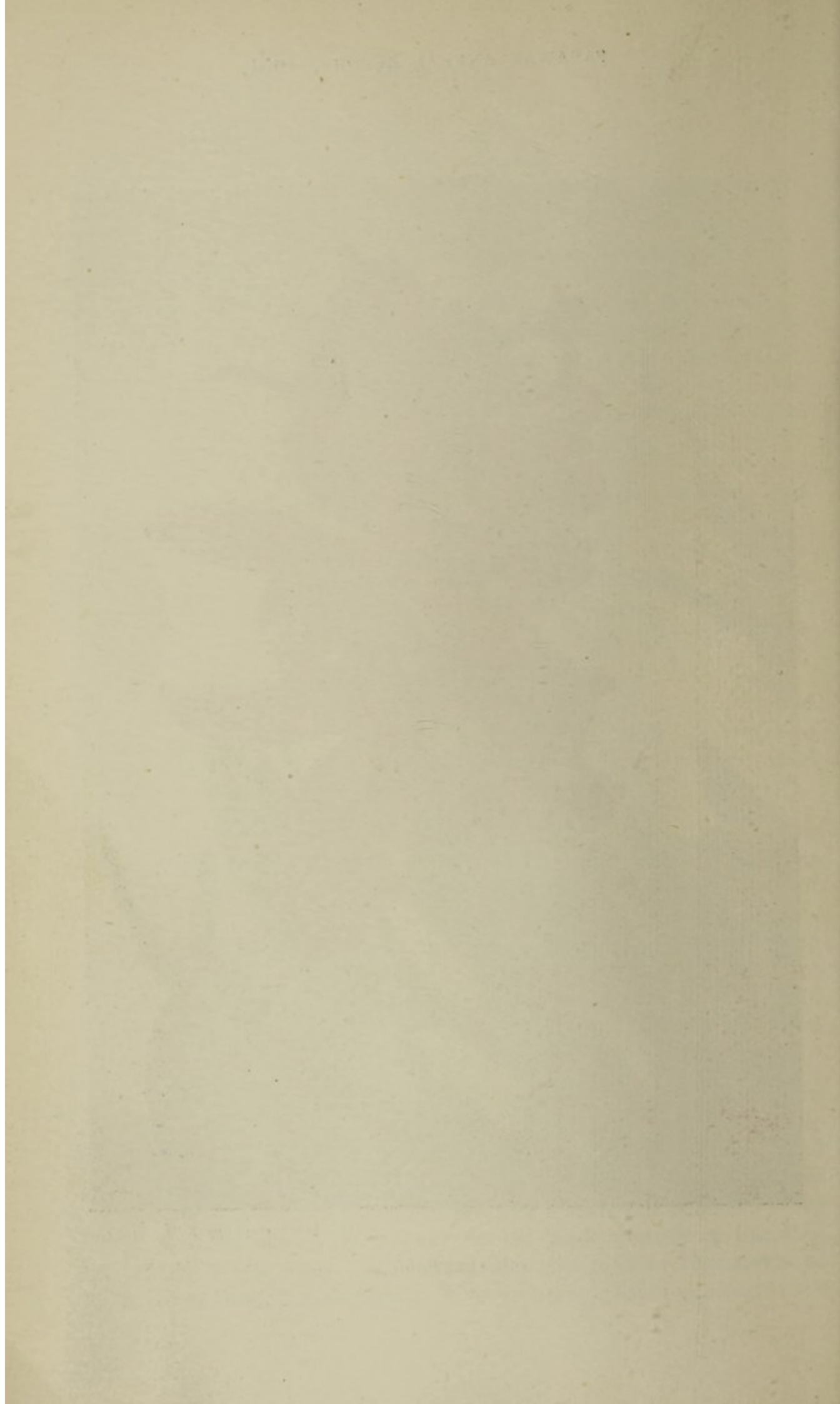
The jungle is a great vibrating board of sound, and much of its life goes on in the top sky-scraper high above the human visitor's head. It is always responsive to strange and ignorant noises. Also, it is affected by heat and light. Its great, varied humming activity comes in the early hours of morning and the late hours of the evening. At noon, the most observant watcher in the world may patrol it and fail to recognise anything other than shadow, and indeed fail to be recognised even by a mosquito!

But those who are prepared patiently to master the dawn or the dusk of Borneo jungle, will find therein one of the richest and most exciting forms of life that the human mind can describe or imagine. There are more than a hundred species of mammals. There are more than six hundred kinds of bird, of which it is easy to see and identify a hundred within a few days. There are literally tens of thousands of sorts of insect and plant. Everywhere, growing along with



[Photograph by K. F. Wong.]

Cattleya Fabia.



the darkly vivid jungle, there is vigorous life which includes some of the most ordinary as well as some of the most extraordinary animals and plants in the world.

Perhaps the most famous of Borneo animals is the Orang Utan or Maias, one of the very few close cousins of *Homo sapiens*. It is only found in Borneo and a small part of Sumatra. Despite constant persecutions and inadequate protection, there are still a number of Maias in Sarawak and in sections of the adjacent territories of Indonesian Borneo and North Borneo. This charming, amiable, chestnut-furred animal, desired by zoos all over the world, can still be seen, shambling from tree to tree in the inland sections of the First and Second Divisions.

Another of the five great apes of the world also occurs in Borneo, the Gibbon or *Wak-wak*, probably the most graceful of all arboreal animals. A favourable pet, it is in captivity very susceptible to pneumonic diseases.

A little below the apes are the monkeys. Here again, Sarawak can claim some distinction. The Proboscis Monkey, represented on North Borneo stamps, is peculiar to the island and is distinguished by an immense rubicund port-wine nose. It seems a little unfair that the native name for this otherwise elegant animal, sometimes standing almost as high as a man, is "Orang Blanda"—in English "a Dutchman."

Sarawak is rich in other mammals, of which there is space to mention only a few. The Rhinoceros is dangerously near extinction, largely owing to the persistent, (now illegal) hunting of these animals by the Dayaks, who sell them to the Chinese. Wild cattles are quite commonly found in the northern part of the Colony; wild elephants are confined to North Borneo. Three sorts of deer are extremely numerous; the Sambhur Deer or *Rusa*, almost as big as a cow, is in some places a nuisance to rice farmers. The tiny Mousedeer or "Pelandok", famous in many Malay legends, does not seem to be so clever as the stories suggest, but on the other hand provides some of the most succulent meat for those who travel through the jungle.

There is only one dangerous animal, the Honey Bear or "Bruang". The Leopard can be immense and magnificent. But the people of the island regard it as effeminate. The

Honey Bear, however, if upset or with a family of young, will attack the unwary traveller. Many are the stories of people who have been clawed and in some cases killed, by angry Honey Bears.

Of the many animals, mention may perhaps be made of the Kelabit Badger, only found in the highlands, which looks rather like a Skunk and performs exactly like one. The flying squirrels, flying lemurs and flying foxes give us variation on the theme of gliding. There are plenty of porcupines, who do *not* discharge their quills. There is a sort of bat which is blind and white, and has a pouch in which lives a special sort of insect not found anywhere else. There are caves which a million bats share with more than a million swifts in the ghostly shadows of daytime and the whirling vortex of dusk. Of course, to those who plough along with a line of porters on a time schedule little of this is revealed, and the tense crowded life of the jungle is only visible to those who give it attention.

There is also to be found in Borneo one of the richest bird faunas in the world. There are several sorts of Hornbill, notorious for their domesticity—the male walls the female into the nest and feeds her therein and only liberates her when the young are ready to fly. There are several of the most beautiful pheasants in the world, including the spectacular Argus. Its feathers are more handsome than those of the peacock; its dancing grounds are stamped out of the mud so that several males can compete to the delight, or at least excitement, of Lady A.

Sarawak has Parrots, Broadbills, ten sorts of Pigeon, Egrets, nearly twenty kinds of Woodpecker, exquisite Honey-eaters and Flower-peckers, the lovely voiced Yellow-Crowned Bulbul, ten kinds of flashing Kingfishers and so many many other birds that it is doubtful if any one person could ever learn to know and recognise them all in one life time.

Some of the birds, such as the Munias or Parrot Finches which probably eat a few million dollars' worth of padi in a year, or the Swiftlets which, from the compassion of their saliva, make edible nests worth many thousands of dollars a year, are of economic interest. The Edible Swifts of Sarawak, along with Edible Turtles, provide two of the most favoured foods for export to gourmets in China.

Sarawak can boast of the presence of the most dangerous and deadly snake in the world, the Hamadryad or King Cobra. This appalling reptile, which can grow over 15 feet in length and is quite common is one of the very few in the world which will deliberately attack human beings. It also has its own hideous beauty.

Lizards, of which there are almost a hundred kinds, are more conspicuous, especially because of the attraction which human dwellings appear to have for some variation; the most obvious are the Gecko and "chichak". An observant person will quite often see Flying Lizards, which actually only glide on membranes extended between the front and back limbs. Sarawak is rich in flying forms, its Flying Snake being one of the most spectacular. This peculiar snake, which looks quite ordinary, can (when it wishes) extend its ribs to produce two sails and soar for quite a distance. One which was let go from the upper storey of the Sarawak Museum, glided nearly 50 yards. Among the amphibians, there are also Flying Frogs and frogs with small bodies and huge feet upon which are suckers. There are also enormous toads, some of them weighing pounds, which like to sit on rotten tree trunks, cogitating.

For the rest, the vertebrate fauna—those with backbones—is mainly to be found in the sea. There are plenty of sharks, sometimes weighing up to hundreds of pounds; although there is no record in recent years of anybody being taken by a shark, but someone is consumed by a crocodile in the rivers each year. There seem to be very few other big fish; so far no one has shown that big game fishing is possible here. This is largely because there appears to be a shortage of feed for big fish around Sarawak's shores—and in general, fish are just numerous enough to satisfy local markets. The only three common big fish which can be taken on line are the Baraccuda, the Horse Mackerel and the Banito. Very big Sting Rays are seen from time to time, and large Saw-fish are sometimes caught in fishermen's nets about the deltas—unfortunately for the fishermen, whose nets are thereby damaged.

Perhaps enough has been said to indicate the tremendous wealth of Sarawak's animal and plant life. Numerous other illustrations of this wealth can be produced from *Molluscs*

(shells), *Crustaceans* (crabs, etc.), *Arthropods* (spiders, etc.) and *Nematodes* (worms). In the vertebrate section of spineless or boneless animals, the variety of forms is immense; Dr. B. M. Hobby, M.A., D. Phil, F.R.E.S. of the Department of Entomology Oxford who accompanied the Oxford University Expedition to Sarawak in 1932, has continued to write descriptive papers on specialised groups of insects ever since, and will himself be the first to admit that he only has a fractional knowledge of the insect fauna of Sarawak.

Sarawak also teems with beautiful flies, loveliest of all being the Rajah Brooke's Bird-Wing which features on Sarawak stamps, though with considerable inaccuracy.

As essential background, of course, to all the animal life, the fauna of this vivid territory, is the plant life, the flora. This is a little less varied, but even so one of the most prolific and fertile. There are some very distinct vegetation forms which in turn largely determine the fauna living within them. Above about 3,000 feet on the numerous mountains there is low vegetation draped with mosses with its own special fauna and flora—the "moss forest habitat." In the lowlands, the jungle grows to great heights and where it has not been felled produces several different levels of animal and plant life. This virgin jungle, with its canopy, sub-canopy intermediate and ground level fauna and flora is the most widespread and the richest environment for the life of Borneo. Big sections of Sarawak are entirely given up to virgin jungle, uninhabited except by the occasional visits of nomadic Punans.

Where man has had his influence there is secondary jungle, gradually reverting to primary jungle over many years and distinguished by the lack of great trees. And on the coastal plain the swamp forests, large areas of mangrove and nipah palm, and along the sand fringes *Casuarina*; as with the animals so with the plants, abundance is the descriptive word.

To the hasty eye, it all looks rather dull, uniform and unexciting. There are no towering banks of orchids or great clutching plants. There is the dark green, background, the damp, and the decay which is the essence of equatorial jungle. But to those who are prepared to take a second, slower look, to sit around patiently, to be bitten by leeches, wonders and beauties will presently reveal themselves. For in Sarawak

are some of the world's most glorious orchids such as the *Arachnis grandiflora*. not obvious but easily found upon the epiphytic trees, which are their hosts. The most weird is perhaps the *Rafflesia*, a staggering yellow and red blossom which comes straight out of the ground as a jungle flower big enough to have your bath in.

But we must draw the line somewhere. The only place is within the jungle itself. A few pages can never describe the mystery of this complexity; ugliness, beauty, discomfort and peace.

XIX

Administration.

The Constitution grants legislative and financial jurisdiction to the Council Negri, a body consisting of twenty-five members, fourteen of whom are official members appointed from the Sarawak Civil Service and eleven of whom are unofficial members representative of the several peoples dwelling within the Colony and of their various interests. The unofficial members are appointed by the Governor in Council and hold office for a period of three years.

In addition to the twenty-five members there are 14 standing members. The Constitution Ordinance provides that a native of Sarawak, who was a member of Council Negri immediately prior to the enactment of the Ordinance, and who is not a member of the Council appointed under the provisions of the Ordinance, shall nevertheless be deemed to be a member of the Council Negri and shall have the right to attend all meetings of the Council and of speaking and voting therein until he shall die or resign or cease to be a member of the Sarawak Civil Service.

The Council Negri has the power to make laws for the peace, order and good government of the Colony and no public money may be expended or any charge whatsoever made upon the revenues of the Colony except with the consent of the Council Negri.

The Constitution Ordinance also provides for a Supreme Council composed of not less than five members, a majority of whom shall be members of the Sarawak Civil Service, and a majority of whom shall be members of the Council Negri.

All powers conferred upon the Rajah or the Rajah in Council by any written law enacted before the date of operation of the Cession of Sarawak to His Majesty are vested in the Governor in Council. In the exercise of his powers and duties the Governor shall consult with the Supreme Council, except in making appointments to the Supreme Council and in cases.

(a) which are of such nature that, in his judgment, His Majesty would sustain material prejudice by consulting the Supreme Council thereon; or

(b) in which the matters to be decided are, in his judgment, too unimportant to require their advice; or

(c) in which the matters to be decided are, in his judgment, too urgent to admit of their advice being given by the time within which it may be necessary for him to act.

The Constitution was granted to Sarawak by the Rajah in 1941 and in 1946, when Sarawak became a Colony, by Letters Patent the Supreme Council and the Council Negri retained the authority granted to them.

Sarawak is divided for administrative purposes into five Divisions, each in charge of a Resident. Each Division is subdivided into a number of Districts, administered by District Officers, and most of the Districts into small areas or sub-stations each in charge of a member of the Native Officers' Service. As far as is practicable, it is the policy of the Government to free Residents and District Officers from as much routine office work as is possible in order that they may tour their areas and maintain the close contact with the people which has always been the key-note of the administration. Native Administration has in the past been of the direct type, with village headmen or chiefs of village groups responsible to European and Malay Officers.

Before the war, however, the Native Administration Order was published as an enabling ordinance to allow the gradual introduction of the people themselves into the administration of their own affairs. This order envisaged the setting up of village committees to replace the individual chiefs but the first experiment on these lines was unsuccessful owing to the outbreak of war and the impossibility of providing adequate supervision.

In 1947 a scheme was drawn up for the development of Local Government through Local Authorities with their own Local Treasuries, and five such Authorities came into being at the beginning of 1948. During the past year eleven new Authorities have been constituted, and there are now sixteen Local Authorities in all. The majority of these Authorities are established on a racial basis, and this seems inevitable at

present if any progress is to be made. There are, however, encouraging signs of co-operation between the various races in certain parts of the country. In Limbang Malays, Chinese, Kedayans, Muruts and Indians participate in the same Authority; a mixed Malay and Dayak Authority has been formed at Lundu in the First Division; and a mixed Malay, Sea Dayak and Land Dayak Authority was about to be launched at Serian at the end of the year. At the beginning of 1950 no less than 195,000 persons were living within the sphere of a Local Authority.

The Local Authority Ordinance, 1948, forms the basis for the powers of these Authorities. Their revenues consist of direct taxes, fines and fees, supplemented by a grant from the Central Government calculated according to the number of tax-payers.

While the standard of efficiency between one Authority and another has differed widely, they have in general shown ability to undertake the duties so far allotted to them. Education has been a subject in which they have shown the greatest interest, and some of them have been quick to appreciate that increased expenditure can generally be met only by increased taxation.

XX

Weights and Measures.

The standard weights and measures recognised under the Laws of the Colony are the Imperial yard, the Imperial pound and the Imperial gallon.

Certain local customary weights and measures having the values set out below are also lawful :—

1 Tahl	= $1\frac{1}{3}$ ozs.
1 Kati (16 tahils)	= $1\frac{1}{3}$ lbs.
1 Pikul (100 katis)	= $133\frac{1}{3}$ lbs.
1 Koyan (40 pikuls)	= $5333\frac{1}{3}$ lbs.
1 Chhun	= 1.19/40 inches.
10 Chhuns	= 1 Chhek = $14\frac{3}{4}$ inches.
1 Panchang	= 108 stacked cubic feet.

XXI

Newspapers and Periodicals.

The Sarawak Tribune, Kuching (Daily) (English).

The Chinese Daily News, Kuching (Daily) (Chinese).

The Ta Tung Oversea Chinese Daily News, Sibu (Chinese).

The Sie Hwa Daily News, Sibu (Chinese).

The Current Critic, Kuching (Bi-weekly) (Chinese).

The Chian Hong Po Daily, Kuching (Chinese).

The Utusan Sarawak, Kuching (Bi-weekly) (Malay).

Pedomani Ra'ayat (Monthly) (Malay).

Pembrita (Monthly) (Iban).

The Sarawak Gazette (Monthly) (English).

Co-operation in Sarawak (Monthly) (English-Malay-Iban).

XXII

Bibliography.

Official Publications.

The Colonial Office List.

Civil Service List.

Government Gazette (twice monthly).

Proceedings of Council Negri (twice yearly).

Sarawak Museum Journal.

Report of the Borneo Salaries Commission, 1947.

The Handbook of Sarawak (1949).

Other Publications of interest.

The Expedition to Borneo of H.M.S. *Dido* for the Suppression of Piracy (containing extracts from the journal of the 1st Rajah)—Capt. H. Keppel, R.N., 1846.

Low's Sarawak—Hugh Low, 1848.

Rajah Brooke's Journals (First Rajah) (Historical)—Capt. Mundy, R.N., 1848.

Life in the Forests of the Far East—Spencer St. John (2 vols.), 1863.

Ten Years in Sarawak (Descriptive)—H.H. Sir Charles Brooke (2nd Rajah), 1866.

The Rajah of Sarawak (1st Rajah)—Jacob, 1876.

Natives of Sarawak and British North Borneo—Ling Roth, 1896.

The Life of Sir James Brooke—Spencer St. John, 1899
Sarawak under its Two White Rajahs. (A history of Sarawak up to a few years before the 2nd Rajah's death)—Baring-Gould and Bampfylde, 1909.

Seventeen Years among the Sea Dyaks of Borneo—Gomes (Missionary), 1911.

The Pagan Tribes of Borneo (Descriptive)—Hose and McDougall, 1912.

My Life in Sarawak—Ranee of Sarawak (Ranee Margaret), 1913.

Borneo, The Land of River and Palm—Eda Green, 1919.
Sarawak. (A small handbook written at the time of the
Malaya-Borneo Exhibition in Singapore, 1922)—H.H.
the Ranee.

Letters from Sarawak (Descriptive)—Mrs. McDougall
(wife of 1st Bishop), 1924.

Rajah Brooke and Baroness Burdett Coutts. (Interesting
letters exchanged between Sir James Brooke and
Baroness Burdett Coutts)—Owen Rutter, 1935.

The Three White Rajahs—H.H. the Ranee, 1939.

A Naturalist in Sarawak—E. Banks—(Kuching Press.
Kuching, 1949).

Bornean Mammals—E. Banks—(Kuching Press, Kuching,
1949).

The Natural Resources of Sarawak—F. W. Roe, 1952.

APPENDIX A.

DEVELOPMENT PLAN.

1951.

SCHEME	Source	Estimated Expenditure to 31.12.51	REMARKS.
AGRICULTURE.		\$	
1. Soil Survey (Scheme D. 816 & D. 816A)	C.D. & W.(R) Local funds (R)	103,800 —	
2. Improvement of Rubber Industry (Scheme D. 826)	C.D. & W. (C & R) Local funds (R)	47,500 12,000	Local fund expenditure met by a grant from the Rubber Fund.
3. Cultivation of Cash Crops (Scheme D. 954)	C.D. & W.(R) Local funds (R)	68,485 —	
4. Mechanical Cultivation (Schemes D. 973 & D. 973A)	C.D. & W. Local funds	81,248 —	C.D.&W. Scheme completed. Continued under Farm Mechanisation Scheme.
5. Development of Farm Mechanisation (Scheme D. 1664)	C.D. & W.(C) Local funds (R)	10,000 57,991	
6. Padi Production— Paya Megok (Schemes D. 1208 & D. 1208A)	C.D. & W. (C & R) Local funds	253,450 —	
7. Padi Production— Niah/Sibuti	C.D. & W. Local funds	17,453 17,453	Scheme shared between C.D. & W. & local funds.
8. Agricultural Staff Training School (Scheme D. 1519)	C.D. & W.(C) Local funds	95,500 —	
9. Cocoa Development— Seed production (Scheme D. 1424)	C.D. & W. (C & R) Local funds	8,340 —	

SCHEME	Source	Estimated Expenditure to 31.12.51 \$	REMARKS.
10. Animal Husbandry (Provision of foundation stock for Farmers on Progeny Return Basis)	C.D. & W. Local funds (C)	— —	
11. Regional Agricultural Research Institute	C.D. & W.(C) Local funds (R)	— —	Joint Institute for Borneo Territories. Sarawak share (60%) shown here.
12. Manufacture of Artificial Fertilizer— experiments	C.D. & W. Local funds	— 2,000	If the experiments are successful and equipment and staff can be obtained larger capital expenditure will be required.
13. Centralised processing factories for Rubber	C.D. & W. Local funds (C)	— 43,899*	
TOTALS AGRICULTURE		819,119	*Cost of Kuap Rubber Factory. Met from Rubber Fund. It is hoped that additional funds will forthcoming for more factories.

FORESTRY.

Forestry Department (Scheme D. 1120)	C.D. & W. (C & R) Local funds	74,997 —	This is in addition to normal expenditure under Forestry Department Head of Office penditure in Part I of Estimates.
TOTALS FORESTRY		74,997	

FISHERIES.

1. Marine Fisheries Research Station Singapore	C.D. & W. Local funds	— 10,344	Five year scheme. Sarawak contribution.
2. Fishery Development	C.D. & W. Local funds	— —	
TOTALS FISHERIES		10,344	Three year Scheme in first instance.

SCHEME	Source	Estimated Expenditure to 31.12.51	REMARKS.
		\$	
MMUNICATIONS.			
ROAD DEVELOP- MENT			
(Schemes (D. 1076, D. 1076A, D. 1076B, D. 1076C)			
1) (a) Reconstruction 29½ miles Kuching/Serian Road	C.D. & W.(C)	317,200	
(b) Survey Serian/ Simanggang Road	C.D. & W.(C) Local funds (C)	120,000 70,000	
(c) Test bores Serian/Simanggang Road	C.D. & W.(C)	22,000	
2) Reconstruction of Bridges in Upper Sarawak area	C.D. & W.(C)	48,573	Completed.
3) Ensengie Road	C.D. & W.(C)	63,555	Work suspended.
(4) (a) Road Limbang to Brunei Border	C.D. & W.(C)	30,924	Completed.
(b) Lawas/Trusan Road	C.D. & W.(C)	23,710	Completed.
(c) Ulu Trusan track, improvement	C.D. & W.(C)	1,000	
(5) Road Making Equipment	C.D. & W.(C)	2,250	
TRUNK ROADS	C.D. & W.(C)	—	
Serian-Simanggang Road	Local funds (C)	—	

SCHEME	Source	Estimated Expenditure to 31.12.51	REMARKS.
		\$	
3. SECONDARY ROADS Butir-Berkenu Road	C.D. & W.(C) Local funds (C)	— —	
4. ROAD RECON- STRUCTION PROGRAMME	C.D. & W.(C) Local funds (C)	— —	{ One-quarter to be met : } Loan Funds.
5. AIRFIELDS			
(1) Kuching Airport (Scheme D. 913, D. 913A, D. 913B)	C.D. & W.(C) Local funds (C)	598,413 68,600	{ Expenditure of \$411,428 } from Joint Reserve Fu
(2) Sibü Airfield (Scheme D. 1542, D. 1542A)	C.D. & W.(C) Local funds (C)	170,000 41,000	
6. PORT DEVELOP- MENT			
(1) Test bores Rejang and Kuching Rivers (Scheme D. 1273)	C.D. & W.(C)	76,000	Completed.
(2) Gunong Ayer	Local funds (C)	—	
(3) Oil Storage, Kuching	Local funds (C)	—	
(4) Oil Storage Sibü	Local funds (C)	25,000	
(5) Wharfage and Godowns, Kuching and Sibü	Local funds (C)	—	

SCHEME	Source	Estimated Expenditure to 31.12.51	REMARKS.
		\$	
TELECOMMUNI- CATIONS			
(i) General	Local funds (C)	5,912	
(ii) Aeronautical (Scheme (D. 1117- D. 1117C)	C.D. & W. (C & R) Local funds (R)	322,657 —	* \$90,000 for Sibu airfield. ** To be met from Central Allocation of C.D. & W. Funds.
WATERWAYS			
Sungei Kut Canal	Local funds (C)	—	
TOTAL COMMUNICATIONS		2,006,794	

FUEL AND POWER.

Electricity Supplies	Local funds (C)	—
TOTALS, FUEL & POWER		—

EDUCATION.

(1) Batu Lintang Training Centre and School (Scheme D. 839, D. 839A)	C.D. & W. (C & R) Local funds (C & R)	486,259 —	Nett cost of existing C.D. & W. Scheme \$623,000. Capital expenditure for per- manent buildings and equip- ment \$1,002,000. Estimated Residual Recur- rent Expenditure \$220,000 p.a.
Rural Improvement School, Kanowit (Scheme D. 838)	C.D. & W. (C & R) Local funds (C & R)	240,911 56,300	

SCHEME	Source	Estimated Expenditure to 31.12.51 \$	REMARKS.
3. Higher Education— Overseas Scholarships	Local funds	10,000	Limited number of Scholarships also awarded under C.D. & W. £1 million scheme.
4. Trade and Technical Education	Local funds	—	Provisional Estimate.
5. Science Laboratories, Secondary Schools	C.D. & W.(C)	—	Grants towards Capital Expenditure.
6. Domestic Science Rooms	C.D. & W.(C)	—	Grants towards Capital Expenditure.
7. Commercial Courses	C.D. & W.(C)	—	Recurrent expenditure to be provided under Part Head Education.
8. Production of Vernacular Literature	Local funds	900	
TOTALS, EDUCATION		794,370	

MEDICAL AND HEALTH.

1. Travelling Dispensaries (Scheme D. 830)	C.D. & W. (C & R) Local funds (C & R)	491,200 —	} Estimated Residual Recurrent Expenditure approx \$207,000 p.a.
2. Extension Anti-T.B. facilities, Kuching	Local funds (C)	—	
3. Health Centre, Kuching	Local funds (C)	—	Equipment \$60,000. Alterations to building \$150,000.
4. Anti-Tuberculosis and Yaws Campaign	Local funds	—	Unallocated.

SCHEME	Source	Estimated Expenditure to 31.12.51	REMARKS.
		\$	
Leper Settlement, re-housing	Local funds (C)	36,500	
Mental Hospital (Inter-Territorial)	C.D. & W.(C) Local funds (R)	— —	} Joint Institution for Borneo Territories. Sarawak's share 60%.
Malaria Survey (Scheme R. 158)	C.D. & W. (C & R)	132,242	
Water Supplies	Local funds (C)	17,000	Scheme Value in 1952 Estimates \$3,850,000 Unallocated 650,000 <hr/> \$4,500,000
TOTALS, MEDICAL AND HEALTH		676,942	

ISCELLANEOUS.

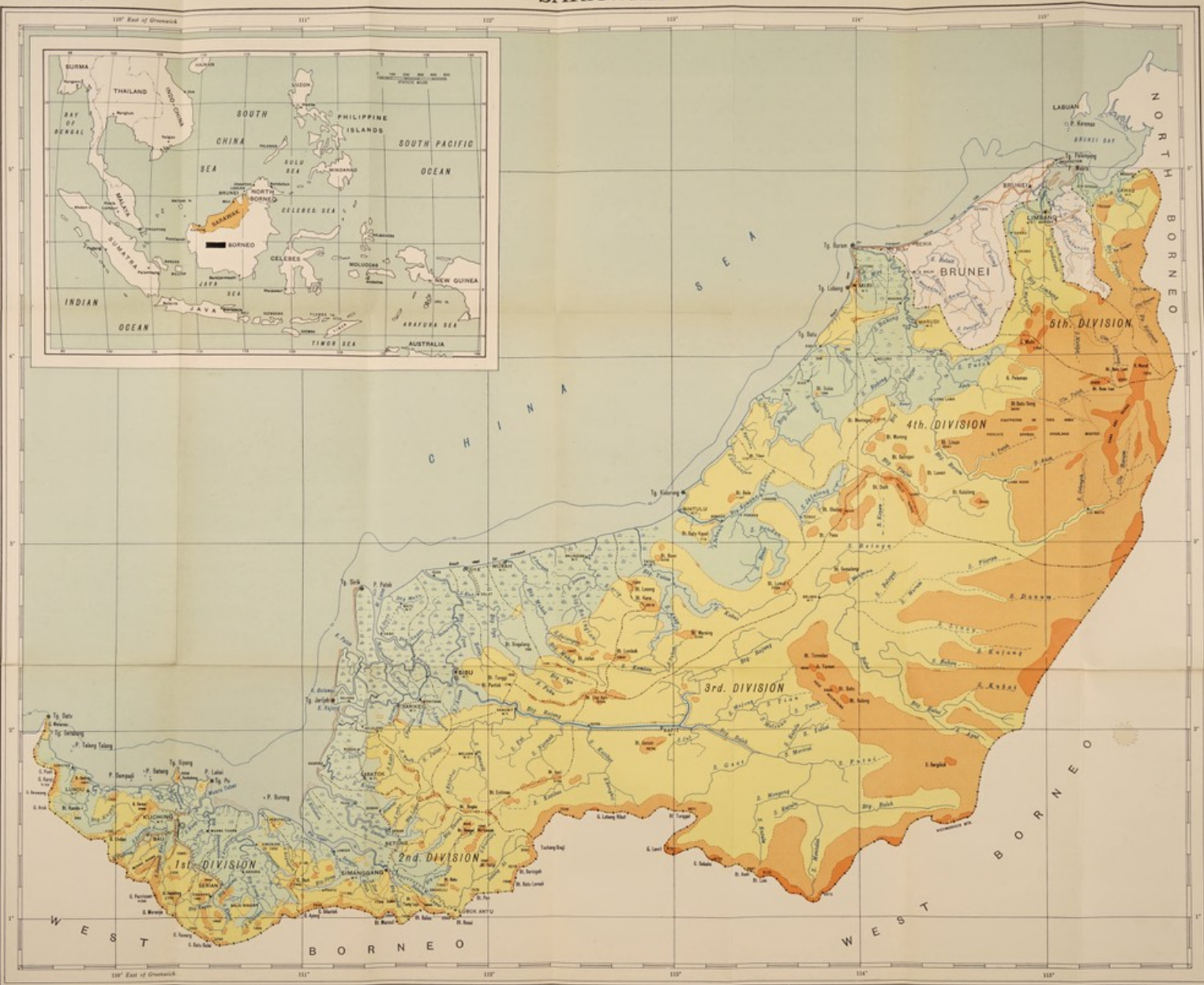
Geological Survey (Scheme D. 1109)	C.D. & W. Local funds (R)	730,941 —	} Joint Scheme for Borneo Territories. Full cost shown. C.D. & W. expenditure to be met from Central Allo- cation of C. D. & W. funds. Provision under Local funds is a contribution towards recurrent expenditure under extended scheme.
Government Housing (Scheme D. 1430)	C.D. & W.(C)	130,000	
Government Buildings	Local funds (C)	120,000	Scheme Value in 1952 Estimates \$1,901,500 Unallocated 1,098,500 <hr/> \$3,000,000

SCHEME	Source	Estimated Expenditure to 31.12.51	REMARKS.
		\$	
4. Housing Schemes	Local funds (C)	—	Kuching \$6,000,00 Miri 500,00 Unallocated 1,500,00 <hr/> \$8,000,00
5. Socio-Economic Research (Scheme R. 270)	C.D. & W. Local funds	71,794 7,903	} C.D. & W. expenditure met from Central Research Allocation of C.D. & W. funds.
6. Trade and Customs (Produce Exports Control)	Local funds (R)	—	
7. Town Development	Local funds (C)	—	Scheme Value in 195 Estimates \$175,00 Unallocated 400,00 <hr/> \$575,00
8. Development Staff	Local funds	—	
9. Meteorological Service	C.D. & W. Local funds	62,555 —	} C.D. & W. expenditure met from Central Allocation of C.D. & W. funds.
10. Broadcasting System	C.D. & W. Local funds (C)	— —	
			} Scheme added by Resolution of Council Negri. C.D. & W. expenditure to be met from Central Allocation of C.D. & W. funds.
TOTALS, MISCELLANEOUS		1,123,193	
GRAND TOTALS			
Less Revenue under Scheme D. 839			
NETT EXPENDITURE		5,505,759	

1:1,000,000

SARAWAK

FIRST EDITION



SARAWAK SERIES NO. 7 First Edition
Compiled and Drawn by Land and
Survey Dept., Sarawak. Nov. 1949.

LEGEND

Road Main	River Surveyed
Road Secondary	River Unsurveyed
Footpath	Swamp
Railway Single Track	Depth Line 10 Fathoms
Headquarters Division	Height
Headquarters District	Contours Approximate
Other Towns	Sandbank
Boundary International	W/T Stations
Boundary Division	Telephone Lines
Boundary District	Airfields
Lighthouse	

Scale 1:1,000,000 or 19.25 Miles to One Inch

STATUTE MILES

KILOMETRES

HEIGHTS IN FEET

ALTITUDE TONTS

OVER 4000 FT.

3000 FT.

100 FT.

SEA LEVEL

GLOSSARY

Bukit	Dr.	Hill
Buang	Eng.	Main River
Geong	G.	Mountain
Kuala	K.	Mouth of River
Lagoon	Lg.	Orchard, Abandoned Reach of River, or sometimes Swampy Lake
Muar	M.	Mouth of River
Pakas	P.	Island
Rangit	R.	River
Tanjung	Tg.	Cape
Ulu		Headwaters

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