The medical report for the State of Pahang.

Contributors

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Federated Malay States.

C O 26723 REC[®] REG[®] 29 AUG 10

THE MEDICAL REPORT

FOR THE

STATE OF PAHANG,

1909.

RETURN OF THE STATISTICS OF POPULATION OF PAHANG FOR THE YEAR 1909.

				Europeans,	Eurasians.	Chinese.	Malays.	Tamils.	Others.	Total.
No. of	Inhabitants in Births during the			134	46	8,695 177	75,462 2,083	1,227	549	84,118 2,300
	Deaths	"	,,		1	874	1,951	177	9‡	3,012
,,,	Immigrants	,,,	.,+							
., Increas	Emigrants Inhabitants in e		.,†		2.3			TI A		
Decreas	e									

METEOROLOGICAL RETURN OF KUALA LIPIS FOR THE YEAR 1909.

			Tempe	rature.			Raint	all.	Wi	nds.
_	Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in Inches.	Degree of Humidity.	General Direction.	Average Force.
January			92	66	17	77.5	11.55			
February			98	63	17.5	77.2	11.57			
March			92	66	20	79.2	9.39			
April			96	68	20	79.6	2.29			
Мау			92	67	19	79.8	8.18			
Tune			93	67	17.6	79.6	6.46			
fuly			94	65	19.3	80.7	3.31			
August			94	60	20.5	78.1	13.05			
September			92	65	20.4	79.0	2.45			
October	 1		98	69	18.3	80.5	10.58			
November			93	66	18.7	77.7	12.98			
December			90	66	15.7	76.7	5.50			
AVERAGE	 		92	65	18.6	78.8	8.11			

^{*} Last census Returns. † No Returns available. ‡ Including five nationalities not reported.

RETURN OF DISEASES AND DEATHS IN 1909 AT THE FOLLOWING INSTITUTIONS:

KUALA LIPIS HOSPITAL; DISTRICT HOSPITALS AT RAUB, BENTONG, PEKAN AND KUANTAN, AND GAOL HOSPITALS AT KUALA LIPIS, PEKAN AND KUANTAN.

		- Tony		vining poital d of 38.	Yearly	Total.	rest.	ining pital d of 19.
	Diseases.			*Remaining in Hospital at end of 1908.	Admis- sions,	Deaths.	+ Total Cases Treated.	#Remaining in Hospital at end of 1909.
					-		-	
GENERA	AL DIS	EASES.		-				
Small-pox				100	- 1			1
Chicken-pox					1	***	1	hanna .
Measles								
Typhus								19 (19)
Dengue					1		1	11/4
Influenza					9		9	
Plague								
Mumps				1	14		15	
Diphtheria								
Febricula					33	1	33	
Enteric Fever					8	2	8	2
Cholera				300				
Dysentery				11	261	46	272	- 8
Yellow Fever								
Beri-beri	***			65	384	42	449	42 '
Malarial Fever-								
(a) Intermittent	-							
Quotidian					101		101	
Tertian					130	5	130	6
Quartan					12	2	12	
Malignant					74	12	74	1
Type undi	agnosed			36	871	32	907	13
(b) Remittent					1	1	1	
(c) Pernicious I	R.							
Phagedæna								
(a) Sloughing				1	2	1	3	
(b) Hospital gan	igrene							
Erysipelas					2	1	2	
	Carr	ried forw	ard	114	1,904	145	2,018	72

^{*} i.e., the year previous to that for which the Return is made.

† "Total cases treated" will, of course, include those remaining in Hospital at the end of the previous year.

‡ The figures in this column to be carried on to the next year's Return.

	DI.			spital d of S.	Yearly	Total.	tal ted.	Inspiring Iospital end of 1909.
	Diseases.			* Remaining in Hospital at end of 1908.	Admissions.	Deaths.	+ Total Cases Treated.	‡Remaining in Hospital at end of 1909.
	Brought	forward		114	1,904	145	2,018	72
GENERAL	DISEASES	-(cont.)						
Pyæmia		***		1	4	2	5	
Septicæmia		***			1	1	1	-
Tetanus								13
Tubercle				1	3	3	4	
Leprosy—		***			9		9	3
(a) Tubercular		***	***		1		1	
(b) Ansesthetic					2		2	-
Yaws		***			2		2	
Syphilis-								
(a) Primary				1	30		31	2
(b) Secondary				4	32		36	2
(c) Inherited		***		2	29		31	5
Gonorrhœa		***	***	2	49		51	3
Hydrophobia		4111						
Seurvy								
Alcoholism					1	1	1	
Delirium Tremens					1		1	
Rheumatic Fever					1		1	
Rheumatism		***		2	100		102	6
Gout			***		1	***	1	1
New Growths, non	-malignant				1		1	
Do. mal	ignant				2		2	. 2
Rickets		***						
Anæmia				5	81	5	86	3
Myxœdema		***						
Diabetes mellitus								
Do. insipidus								
Debility				6	88	13	94	1
Other Diseases	/				16	3	16	100
			***		1			2 44
	Carried	l forward	***	138	2,358	173	2,496	99

^{*} i.e., the year previous to that for which the Return is made.

† "Total cases treated" will, of course, include those remaining in Hospital at the end of the previous year.

‡ The figures in this column to be carried on to the next year's Return.

				ining pital of	Yearly	Total.	tal ted.	Remaining a Hospital at end of 1909.
D	riseases.			*Remaining in Hospital at end of 1908.	Admis- sions.	Deaths.	+ Total Cases Treated.	†Remaining in Hospital at end of 1909.
		ht forward	ı	138	2,358	178	2,496	99
	DISEAS OUS SYSTE							
Sub-Section 1—	ous Siste	.м.						
Neuritis					7	***	7	I
Meningitis					2	2	2	
Myelitis			***					
Hydrocephalus			***					
Encephalitis								
Abscess of brain			***					
Concussion of bra	ain		***		2	1	2	
Sub-Section 2—								
Apoplexy			***	1	5	3	6	
Paralysis					2	1	2	Parties and the same of the sa
Bed-sore								
Chorea						1669		
Epilepsy								
Neuralgia			***		2		2	
Hysteria					2		2	
Sub-Section 3—								
Idioey				11-0				
Mania				2	12	1	14	1
Melancholia					7		7	1
Dementia					4		4	2
Delusional Insan	ity							
Other Diseases of the	he System				12	1	12	2
	EYE.							
Conjunctiva-					10000			1
Conjunctivitis			***	1	7		8	
Cornea—								10-1
Keratitis			***		1	1		
Ulceration			***	***	8	***	8	
Opthalmia			***					
	Carri	ed forward	a	142	2,430	182	2,572	106

^{*} i.e., the year previous to that for which the Return is made.

† "Total cases treated" will, of course, include those remaining in Hospital at the end of the previous year.

‡ The figures in this column to be carried on to the next year's Return.

				ining pital d of S.	Yearly	Total.	tal sed.	ining pitai d of 9.
D	liseases.			*Remaining in Hospital at end of 1908.	Admis- sions.	Deaths.	+Total Cases Treated.	#Remaining in Hospital at end of 1909.
	Brought	forward		142	2,430	182	2,572	106
LOCAL DI	SEASES-	(cont.)			1915	A SALL		
Schlerotic-	E—(cont.)							
Staphyloma								All with
Iris—			***					
Table								
(I)		***	***		5		5	
11		***	***				,	
Lens—	*** ***	***	***					
0.1								1
and the same of th		***	***					1
						1 2 1 1		
Entropion		***	***				300	
Other Eye Diseases	***	***			3		3	1
	EAR.							
Inflammation			***					
Other Ear Diseases					2		2	
	Nose.							
Inflammation		***						
Other Nose Disease	s,				140	1119		1000
CIRCULA	TORY SYST	ем.				74		Page 1
Membranes—					10	1000		
Pericarditis			***		1	1	1	1-03
Endocarditis				10 10 3	111	100		
Valvular Disease	s		***	1	21	14	22	1
Muscular Substance	e					43		
Hypertrophy		***			1	1	1	
Dilatation	***	111	***			l and		
Other Diseases of the	he System				6	1	6	1
	ATORY SYST	EM.						
Laryngitis	15				5	2	5	0000
	Carrie	 I forward	***					
-	CHITTEE	Jordara	***	143	2,474	201	2,617	108

^{*} i.e., the year previous to that for which the Return is made.

† "Total cases treated" will, of course, include those remaining in Hospital at the end of the previous year.

‡ The figures in this column to be carried on to the next year's Return.

	The same of the sa		spital of of 38.	Yearly	Total.	tal es ted.	Remaining Hospital at end of 1909.
	Diseases.		* Remaining in Hospital at end of 1908.	Admissions.	Deaths.	+ Total Cases Treated.	#Remaining in Hospital at end of 1909.
	Brought forwar	d	143	2,474	201	2,617	108
LOCAL I	DISEASES-(cont	.)					
RESPIRATOR	RY SYSTEM-(cont.)						
Bronchi-						-	
Bronchitis		***	4	84	*** -	88	1
Asthma		***	1	18	3	19	2
Lung-							
Congestion		***				3000	
Hæmoptysis		***		1		1	
Pneumonia			1	29	16	30	1
Gangrene				2	2	2	1
Phthisis			9	92	50	101	4
Emphysema							I HE
Pleura—							Para.
Pleurisy	1 =1			5		5	2
Empyema				4		4	1
Other Diseases of	the System	***					
Diges	STIVE SYSTEM.						
Mouth-						100	
Stomatitis				4		4	
Dental Periostium							
Gum-boil				1	275	1	Bress
Fauces—							
Tonsillitis		2		2		2	
Stomach— Gastritis							
Donner	*** *** ***	****	***	6	1	6	
Intestines—		***		89	1	39	
Enteritis	*** *** ***	***	1	5	5	6	
Sprue				3			
Hernia				1	3	3	
Constipation		1559	***		****	1	-
Diarrhœa		***		28		28	
	Carried forward		6	160	21	166	6
	Carried Joriean	d	165	2,958	303	3,123	125

^{*} i.e., the year previous to that for which the Return is made.

† "Total cases treated" will, of course, include those remaining in Hospital at the end of the previous year.

‡ The figures in this column to be carried on to the next year's Return.

-		ning pital of 8.	Yearly	Total.	2 - ¥	ital of
1	Diseases.	*Remaining in Hospital at end of 1908.	Admis- sions.	Deaths.	+Total Cases Treated.	‡ Remaining in Hospital at end of 1909.
LOCAL DI	Brought forward	 165	2,958	303	3,123	125
Digestive	System-(cont.)					
Rectum and Anus-	-					
Hemorrhoids		 ***	11		11	1
Liver—						
Hepatitis		 	2		2	
Abscess Liver		 	3	2	3	
Cirrhosis		 	4	1	4	2
Congestion Liver						
Jaundice		 1	9	4	10	
Peritoneum-						STATE OF THE PARTY.
Peritonitis	*** *** -***	 ***	9	1	9	
Ascites		 	7	2	7	
Other Diseases of th	ne System	 1	18		19	3:
Lywnu	ATIC SYSTEM.					-
Spleen—	CHO DISTEM.					THE REAL PROPERTY.
Splenitis		 9	124	2	133	5.
Bubo		 	19		19	1
Lymphangitis		 	4		4	
Elephantiasis						
Other Diseases of th	he System		2			
Heres	EY SYSTEM.					
Kidney-	an intern.					
Acute Nephritis		 	1		1	
Bright's Disease		 8	26	5	34	1
Hæmaturia						
Chyluria						
Bladder—				13-4		
Cystitis		 	1		1	direction of the last
Calculus		 	1		1	
Other Diseases of t						1000
	Carried forward	 184	3,197	320	3,381	138
-		1			10000	

^{*} i.c., the year previous to that for which the Return is made.

+ "Total cases treated" will, of course, include those remaining in Hospital at the end of the previous year.

The figures in this column to be carried on to the next year's Return.

					d of of	Yearly	Total.	fall ed.	spital d of 9.
	Diseases.				*Remaining in Hospital at end of 1908.	Admis- sions.	Deaths.	+Total Cases Treated.	‡ Remaining in Hospital at end of 1909.
	Bre	ought fo	orward		184	3,197	320	3,381	138
	DISEAS								
Gener Urethra—	ATIVE S	YSTEM.							
Stricture						6	1	6	
Prepuce—			***						
Phimosis					1	5	***	6	
Paraphimosis	***	***				3		3	1
Penis—	***		***				7.55		1
Soft Chancre						3		3	
Serotum-		***							
Sloughing Scrot	um				1			1	
Tunica Vaginalis-									
Hydrocele						2		2	
Testicle—		***							
Orchitis						8		8	1
Epididymitis						6		6	
Other Diseases (n						3		3	
Uterus-									
Metritis	110				1	1		2	
Uterine Displace	ements			***		1		-	
Amenorrhœa						1		1	
Dysmenorrhœa					***	2	***	2	1
Menorrhagia						1	***	1	
Leucorrhœa		***				1		1	
Other Diseases (f						2		2.	1
ORGANS						-	***	-	1
Bones-						1			
Ostitis					***	2		2	
Periostitis	***	***				2		2	1
Caries	***	***	***		1	5	1	6	1
Necrosis				***	2	3		5	P. Wast
	Co	erried j	forward	ı	190	3,252	322	3,442	140

^{*} i.e., the year previous to that for which the Return is made.

† "Total cases treated" will, of course, include those remaining in Hospital at the end of the previous year.

‡ The figures in this column to be carried on to the next year's Return.

					pital of S.	Yearly	Total.	E - F	pital of 9.
	Diseases.				* Remaining in Hospital at end of 1908.	Admissions.	Deaths.	+ Total Cases Treated.	‡Remaining in Hospital at end of 1909.
	Bre	night f	orward		190	.3,252	322	3,442	140
LOCAL 1	DISEASI	ES—(cont.)					LADO	
Organs of	Locomor	rion-	(cont.)						1000
Joints									
Synovitis	***				3	10		13	1
Ankylosis						1		1	1000
Spine-									
Caries Spine		***							-
Curvature Spin	e, Fractu	re	***	***		2	2	2	
Muscles-									
Myalgia						2		2	
Other Diseases						4	1	4	
								1	-
Conni Cellulitis		ISSUE.			1	18	1	- 19	1
.,					8	93	7	101	5-
		***	***			,,,		-	100
Gangrene	***							THE W	
Eczema	SKIN.				2	20		22	1
D 1 1	***					2		2	
					1	4	1	4	1000
Herpes	***		***	***		1		1	1
Do. Zoster	***	***	***		40		6	442	37
Ulcer		***	***	***	42	400		1	1
Boil			***	***	***	11	111	. 11	
Carbunele	***			***		5		5	1
Onychia	***	150	***				100	1	1
Whitlow		***	***	****		1		1	1
Other Diseases		***			1	25	1	26	1
Gen	ERAL IN	JURIES	8.				100	-	1
Burns and Scald						1	***	1	
Sunstroke							1	1	1886
Multiple Injury	***	1			1	4	1	5	100
									105
	C	arried	forwar	d	248	3,856	341	4,104	187

^{*} i.e., the year previous to that for which the Return is made.

† "Total cases treated" will, of course, include those remaining in Hospital at the end of the previous year.

The figures in this column to be carried on to the next year's Return.

D	iseases.				aining sepital ad of 008.	Yearly	Total.	+Total Cases Treated.	maining Hospital end of 1909.
	iseuses.				*Remaining in Hospital at end of 1908.	Admis- sions.	Deaths.	+Tot Cass Tress	‡ Remaining in Hospital at end of 1909.
	Br	ought	forward	***	248	3,856	341	4,104	187
GENERAL I	NJURII	E8(cont.)						
Starvation	***		***						
Shock			***			2	1	2	
LOCAL	Inju	RIES.							
Burns and Scalds			***	***		9		9	2
Wounds					4	131	3	135	6
Sprains						14		14	
Dislocations	***			***		2		2	
Fractures, simple		***	***			19		19	5
Do. compoun	d		***		1	16	1	17	3
Other Injuries					***	25	1	25	2
SURGICAL OPERATIO	ONS				2	11		13	3
Malingering						11		11	
Pe	DISONS								
Mercury				***					
Alcohol			***			1		1	
Opium					1	4		5	
Other Poisons						4	1	4	
Poisoned Wounds						2		2	
	RASITE	s.							
Distomum Sinense									
Toenia Solium									
Ascaris Lumbricoide	es	***		***		12		12	
Ankylostomum Due	odenal	e	***	***	2	63	8	65	10
Oxyuris Vermicular	is								
Filaria Medinensis									
Acarus Scabiei						29		29	1
Tinea Circinata	***		***		2			2	
Other Parasites		***			1	3		4	
Under Observation	N	***			3	50	11	53	7
			TOTAL			-			-
-			TOTAL		264	4,264	367	4,528	226

^{*}i.e., the year previous to that for which the Return is made.

+"Total cases treated" will, of course, include those remaining in Hospital at the end of the previous year.

The figures in this column to be carried on to the next year's Return.

FEDERATED MALAY STATES.

STATE OF PAHANG.

MEDICAL REPORT FOR THE YEAR 1909.

- 2. The population in 1907 was estimated at 100,000, and in the absence of accurate returns of immigration and emigration it would be difficult to say with certainty if there has been any increase or decrease of the population, but with the incoming during the year of some 1,500 coolies engaged in railway construction and in rubber planting, it may fairly be assumed that the population of Pahaug at the end of January, 1909, was more than 100,000. At the last census (1901) the population was found to be 84,113.
- The Medical Officer in Charge, Pahang, is the Registrar of Births and Deaths for the whole State.

The returns are sent to him from the different District Officers, who are Deputy Registrars, except at Pekan, where the Medical Officer is Deputy Registrar.

The various Penghulus and Police Officers send their returns to the various Deputy Registrars. This arrangement has been found to work satisfactorily, and although there are often delays in the registration of deaths and births, the peasant is becoming more and more accustomed to the necessity of reporting a death or birth and the long delays of the past are becoming fewer.

 The number of deaths registered during 1909 amounted to 3,012 as against 2,810 in 1908.

Calculated on a population of 100,000 the death-rate for 1909 works out at 30.10 per mille.

The number of births in 1909 was 2,300; in 1908 the figures were 2,448.

The mortality among infants under one year of age was 389 or 16.91 per cent. of total number of births.

It is significant that in the purely Malay districts of Temerloh and Pekan the deaths of children under twelve months of age were highest, and reached 89 and 116, respectively, out of a total number of births of 611 and 543 for each of these districts.

The chief causes of death among the infants, as reported by the parents, were fever, colic, and convulsions.

A large number of women lose their lives at childbirth, nor is this to be wondered at seeing that it is usually the oldest and dirtiest woman in the village who is the midwife.

			AG	ES A	T DEATH.			
					Male.	Female.		Total.
Unknown			***	***	51	 10		63*
Under 1 ye	ear of	age	***	***	219	 170	***	389
., 5	**				243	 210		453
5-10	***	***	***	***	74	 62	***	136
10-20					70	 54		124
20-25				***	110	 32		142
25-35					457	 96		553
35-45				***	411	 74		485
45-55					209	 84	****	293
55-75					169	 120		289
75 and a	bove		-	***	42	 43		85
			Total	***	2,055	 955	***	3,012
					Accompany 1			

ZYMOTIC DISEASES AND VACCINATION.

6. The vaccination is mostly performed by three vaccinators, who travel to the remotest parts of Pahang, and much of their success depends on the activity of the Penghulus (or headmen) in gathering together the children. From what I have noticed I feel sure that more could be done, but while transport is such a costly affair, the work of the vaccinators cannot be supervised as it should be. I have just issued a circular instructing the vaccinators not to be dependent on the Penghulus, but to themselves make, when possible, a house-to-house inspection, by this means they would treat children who now get overlooked. Each vaccinator is also instructed to take with him when visiting villages far from the beaten track tabloids of quinine (grains ii) for the children suffering from fever.

In 1907 there were 5,849 vaccinations with failures ... 18.17 per cent.
In 1908 , 4,052 , , ... 11.03 ...

In 1909, 5,156 were vaccinated with 12.70 per cent. failures.

The proportion of failures seems to be excessive, but is not so really, for many of the failures include the vaccination of adults, who have already submitted themselves to the operation years previously.

The maintenance of a highly active vaccine lymph in the tropics is a matter of great importance and is more difficult for obvious reasons to attain here than in a cold climate.

The vaccine supplied from the Pasteur Institute, Saigon, has proved to be generally satisfactory, failures that do occur may be attributed to the vaccine having been kept too long before use; this, unfortunately, in a place like Pahang, where long journeys have to be undertaken, is at present unavoidable.

- 8. Some authorities on tropical medicine teach that the protection from vaccination against small-pox is not as lasting in tropical as in sub-tropical regions, but no reliable data has been put forward in support of this theory. No immunity seems, however, to have been lost to the people in the Federated Malay States. One need not go back many years to the pre-vaccinating period to find the ravages that were caused by small-pox. Villages were abandoned and the mortality appalling.
- Whatever advantages the Malay may be said to enjoy from the advent of the British, that of the practical suppression and control of small-pox is not the least.

In the Pekan district there was in August a case of small-pox, the source of infection was, according to Dr. Leicester, the Medical Officer, Pekan, traced to the patient's husband bringing it from Marsin in Johore, where small-pox was reported to be raging. Active steps were taken to isolate the infected and all contacts were vaccinated; the Malay constable performing quarantine duty, however, contracted the disease on the 6th September, both cases recovered and the outbreak terminated.

- 10. In connection with this small-pox outbreak it is interesting to note that a child aged eight months, belonging to the woman suffering from small-pox, did not contract the disease; this child had been twice before unsuccessfully vaccinated, it was again vaccinated after the mother developed small-pox but still with no result. No other cases of small-pox were reported during the year. From time to time small-pox is introduced into the Federated Malay States, generally by pilgrims returning from Mecca, but the disease is usually soon stamped out.
- An outbreak of measles occurred at small villages in the Bentong district, which caused the death of eight children from, it is said, Broncho pneumonia.

This termination in the Federated Malay States is most unusual, the general experience of medical men in this part of the world is that measles in the native is a comparatively insignificant malady with no mortality. I cannot help thinking that some of these fatal cases were caused by malignant malaria attacking the children while suffering from measles.

The following is a table showing the number attacked, mortality and the names of the villages:

Situation.		No. of cases.			Mortality.	Remarks.			
Benus			52		4	 Due to Bronch	o pneumonia		
Karak		***	50	-	nil		The same of		
Sabai			40		4	 ,,	,,,		
Bentong	town		8		nil				

MUMPS.

12. There was a small outbreak of mumps among Malay adults, chiefly boatmen; no complications followed.

PATIENTS TREATED.

13. The number of patients treated in the State hospitals during 1909 shows a reduction of 811; this may, I think, in part be accounted for by the opening of private hospitals. Hitherto a large number of coolies was sent to Government hospitals for treatment, but for the greater part of last year estates like the Pahang Rubber Company, Raub; Karak Rubber Estate, Bentong; and Loke Yew's Estate, Kuala Pahang, have had their own hospitals and dressers to treat their own sick.

The mining population round Bentong has dwindled to small proportions.

The admission into hospital of prostitutes has also much decreased.

IN-PATIENTS.										
1902			***	***		***				1,894
1903										2,008
1904										2,206
1905	***	***		***						2,984
1906		***								4,055
1907			***	***			***			4,543
1908										5,339
1909		•••								4,528

The admissions of Malays into the State hospitals number 460 or 11.13 per cent. of the total admissions.

In Kuala Lipis 102 Malays were admitted out of a total of 701 admissions for all nationalities.

In Pekan, a purely Malay district, 40 Malays came into hospital out of 156 admitted.

A ward for Malays only is much needed in this district; if the sick Malay is to be encouraged to come into hospital a special ward must be provided for him with a separate kitchen in charge of a Malay cook. At present he is obliged to occupy the same ward as Chinese, Tamils, etc., an arrangement he considers objectionable.

TOTAL NUMBER OF PATIENTS TREATED IN THE DIFFERENT HOSPITALS, 1909.

Kuala Lipis			717 w	ith a me	ortality o	f 4.04	per cent.
"	Gaol	***	91	11	**	1.09	,,
Raub			1,000		","	8.05	
Bentong			1,473	***	11	10.11	
Pekan			162			11.72	
Gaol	****		12		**	nil	
Kuantan			1,033	**	**	8.13	per cent.
Ga			40			2.05	

DURING 1908 THE FIGURES WERE AS FOLLOWS

Kuala Lipis	***			800 w	ith a mortality	of 4.37 pe	er cent.
Raub				1,032	,,	10.75	**
Bentong		***	***	2,131		9.33	**
Pekan				149	,,	11.04	,,
Kuantan				992		7.76	

THE PREVAILING DISEASES TREATED IN THE HOSPITALS ARE:

Malarial feve	rs		 			1,225	with	52	deaths
Beri-beri			 ***			449	11	42	,,
Dysentery			 	***		272	.,,	46	**
Diarrhœa			 			205	"	21	,,,
Splenitis			 			133	,,,	2	
Phthisis			 			101		50	
Ankylostomi	asis		 			65	11	8	,,
Ulcer		***	 		***	442	**	6	,,

MALARIAL FEVERS.

One thousand two hundred and twenty-five cases of malarial fever were treated with a mortality of 4.24 per cent. There were 133 cases of splenitis, and no doubt 80 per cent. of them should have been returned as chronic malaria. Each hospital is now equipped with a microscope, cover slips, slides and stains, and every endeavour is made to diagnose malaria with these aids.

The commonest type of malaria was found to be benign tertian, then the malignant tertian and rarest the quartan.

14. It has been stated that the towns and villages of Pahang appear to be comparatively free from malaria. I regret that from the experience of the past year I am unable to support this statement.

The Medical Officer of Raub writes in his report of that town-

"Malarial fever has been very prevalent especially amongst the Europeans. Every European living within the town boundaries has suffered with more or less severity from the disease."

The Medical Officer himself and Nurse Sutton were the greatest victims. The latter was found by Sir Patrick Manson to be so "run down" from the effects of fever contracted while nursing a case in Raub previous to her departure for Europe that she was unable to return at the expiration of her leave and was granted, in consequence, an extension of some months' duration.

The Medical Officer, Kuantan, reports that

"Malaria shows an increase as is to be expected with increase of population. Considering as a whole I do not think that at present it can be called very malarious, though nothing is more certain with an increase of population the town of Kuantan will become excessively and dangerously malarious unless means are taken to avoid the calamity and potential menace to the prosperity of the port."

On a rubber estate about 14 miles from Bentong the coolies suffered most markedly from malaria, the infection being bigger than I have ever seen anywhere else in the Federated Malay States during the last twenty years. The largest number of admissions for any one disease into our various hospitals is from malarial fever. The cause of death from "fever" given in the registration returns amounted to 1,345 out of a total number of 3,012 deaths from all causes.

I am aware the causes in this instance are partly fallacious but even allowing a large margin for errors there still remains a number of deaths due undoubtedly to malarial fever. It would seem that from the suckling to old age all paid their tribute to malaria.

15. On the other hand, Kuala Lipis, the official capital, is remarkably free from malaria. No anopheline mosquitoes were discovered although the larvæ were constantly looked for. But stogomyia are abundant and are likely to increase in number as many householders keep barrels full of water for household purposes. The sand-flies (Simulidæ) are prevalent and are a great nuisance, also midges (Coratopogon).

In July last I sent some flies to the Government Entomologist, he reports that only one of the specimens belonged to the Simulidæ, the other flies submitted by me he placed as belonging to the Drosophiliæ, and although similar flies had been despatched to England they had not been identified, and were probably new to science.

An anopheline mosquito, caught by me while in the upper reaches of the Pahang river, was identified by Dr. Stanton as Myzorhynchus barbirostris, probably a malaria carrier, but certainly a filarial one. A large tabanus, taken by me at the Gap, was kindly sent by Dr. Stanton to Miss Richards, who is publishing a monograph of the Tabanidæ of the oriental region in the Indian Museum Records, London. She reported that it was a new species and has named it Tabanus perakensis. It is difficult to see why this name was chosen, as the fly was caught on the borders of Pahang and Selangor, nowhere near Perak.

ANTI-MALARIAL MEASURES.

- 16. The travelling dispensary on the Pahang river sanctioned for this year will be an anti-malarial measure of some importance. It is hoped by this means that the free distribution of quinine will reach the large population that has not benefited hitherto; except on rare occasions, when visited by vaccinators or when an officer comes to collect rent, these inhabitants have been left very much to themselves. Regular visits by a Malay dresser will, it is hoped, alleviate a good deal of unnecessary suffering especially among the children.
- 17. The Pahang river, extending from Kuala Lipis to near its mouth at Pekan, is about 200 miles in length and is fairly thickly populated on its banks for two-thirds of its extent. The only place between Kuala Lipis and Pekan where medical attention of any sort is obtainable is Temerloh, where a Malay dresser is stationed. He has done good work, treating 2,114 out-patients, vaccinating 651, and visiting many of the neighbouring villages and distributing medicines. The need of a similar dispensary with a dresser at Pulau Tawar, a populous district about midway from Kuala Lipis to Temerloh, is obvious, and I hope such a provision will be voted in next year's budget.
- 18. The only way to deal with the prevention of malaria in a large and undeveloped State like Pahang, is by the free distribution of quinine among the people, especially to those far away from any Government institution. The reduction of anophelines by drainage, except perhaps in a few towns, is in my opinion out of the question. At present small stocks of quinine capsules (gr. v) are kept at the various police stations in the out-districts. The different Penghulus have been given quinine capsules with instructions printed in Malay as to how and why the quinine is given.

Many of the Malay schools have had capsules supplied. The leaflet containing facts about quinine and mosquitoes is read out to the pupils frequently. As far as I can judge the Malays seem to be very grateful for these efforts to reduce malarial fever among them.

- 19. The following is a translation of the leaflet distributed to the Malays, police stations and schools:
 - (1) Quinine is the only medicine that will cure malarial fever;
 - (2) If taken once a week will prevent attacks of fever;
 - (3) The dose is one capsule for a grown-up man or woman every day for as long as the fever continues and for 14 days after. If you open one of the capsules and divide the powder into five parts, you can give one of these parts to a baby one year old or under. Half of one of these powders can be given to an infant one or two months old;
 - (4) Do not stop taking quinine as soon as the fever goes, but continue taking quinine for 14 days longer;
 - (5) Fever is caused by the mosquito biting a person or child who has fever and then biting a healthy person. So if you can prevent a mosquito from biting you, you will not get fever;
 - (6) Malay children get fever sometimes very badly, and if the fever will not stop after taking quinine for 4 or 5 days take the child to see a Doctor if you can;
 - (7) In giving quinine to young babies and children, mix up the medicine in sugar and water to take away the bitterness.

Altogether 108 lbs. of quinine have been used during the year and 23,500 capsules distributed.

Recently two-grain tabloids (not coated) have been distributed for the use of children.

All this has been met out of current revenue.

BERI-BERI.

20. Most of the 449 cases occurred at the mining centres on the East Coast, at Raub and Bentong.

There was an outbreak on a coconut estate at the mouth of the Pahang river, where an inferior quality of Siamese rice was supplied the coolies.

In all the Government hospitals only parboiled rice is given to the patients.

DYSENTERY.

21. There were 272 cases of dysentery treated in our hospitals with a mortality of 16.91. An endeavour has been made to separate this disease by careful diagnosis from diarrhea, the prevailing type of dysentery is the bacillary. There were only three cases of hepatic abscess reported, with two deaths. The one case at Lipis was operated on, and completely regaining his health is now working as a road cooly.

DIARRHCEA.

22. Two hundred and five cases were treated with 21 deaths.

PHTHISIS.

23. Phthisis has been a very fatal disease with 101 admissions and 50 deaths, the majority of these cases came into hospital in the very last stages.

ANKYLOSTOMIASIS.

- 24. Up to the time of writing this report there were 77 admissions with eight deaths. Endeavours have been made by microscopical search to find the ova of the ankylostoma, in order to estimate the prevalence of the disease among coolies admitted into the Pahang hospitals. Dr. Harrison, the Medical Officer, Kuala Kubu, from the examination of 429 cases, found the ova of the ankylostoma in 47.78 per cent. Dr. Stanton, of Kuala Lumpur Institute, found 25 per cent. of estate coolies infected, and in Kuala Lipis hospital out of 195 cases examined 26.6 per cent. contained the ova.
- 25. So far as the Federated Malay States are interested the industrial efficiency is very much concerned by the prevalence of this disease. The conditions for its spreading outside the body in this country are ideal. We must not lose sight of the fact that every week large numbers of Indian coolies, 25 per cent. of whom at least harbour the ankylostoma, arrive in the Federated Malay States, and are scattered, carrying with them their ova, tainting new places, and helping to increase the danger in other already infected areas.
- 26. There are several degrees of infection, the "hook worm" demonstrates its presence in the body in different ways, first by loss of energy, secondly by obvious ill-health, and finally by death. Many a cooly is no doubt called lazy when really his apathy is due to mild ankylostomiasis.

The only accurate way of diagnosing ankylostomiasis is by the microscope. In the Pahang hospitals this has become a daily routine and a special record is kept of these examinations. It is unfortunate that the more convenient way of detecting the possible presence of ankylostoma through finding Eosinophelia is impossible in native patients.

27. In the Kuala Lipis hospital many obscure cases of general malaise, slight rise of temperature, with only one or two ova of the ankylostoma under each cover slip, recovered at once after an anthelmintic had expelled 20 or 30 worms, or even less.

Massive infections cause the patient to be markedly ill with anaemia and ordema about the face, producing a very dry condition of the skin, this is very noticeable in an Indian and generally means a fatal termination. The patient has to be specially prepared by diet and purgatives before being treated, the most efficacious anthelminitic in our hands was found to be beta napthol in 30-grain doses, every two hours, until 90 grains had been taken, this was followed in two hours time by a dose of castor oil.

Thymol and also chloroform and eucalyptol and castor oil mixture, recommended by Sir Patrick Manson, were tried but found not to be as effective as the big doses of beta napthol, the latter did not appear to produce any bad effects. But whatever drug was tried no good result would accrue unless the patient was properly prepared first.

28. From what I have already said, based as it is on the experience of treating and observing coolies for many years, I am unable to agree with what is taught in the chief text books on tropical medicine, that nothing need be done for a patient passing ankylostoma ova in his excreta unless anæmia appears. It is recognised that the "female ankylostoma produces a prodigious and never-ending stream of eggs which passes out in the fæces of the host." This being so, it is obviously the duty of Medical Officers who have to treat coolies, especially Indians, to endeavour to expel the ankylostoma as soon as its presence is recognised, irrespective of the infection being severe or mild, or whether anæmia is present or not. I feel sure that even the presence of a few ankylostoma must be regarded as a source of danger to the cooly, who is often over-worked and ill-nourished, and whose power of resistance to disease is, therefore, much reduced, and I also realised that as long as he is passing ova he is a source of danger to others.

29. Frequent examinations of the fæces of the kampong Malay failed to show any ankylostoma ova. This was only to be expected when we remember that these Malays use the Pahang river and its tributaries as their latrines, for it has been found that this ova will not develop in strong running water.

VENEREAL DISEASE.

30. Every encouragement is given to the prostitutes to come to hospital for treatment, they are admitted and treated free of charge, and medicines are issued to them to take to their homes, yet, notwithstanding this generous treatment, it cannot be said that advantage is taken of it. Judging by the smallness of admissions into the hospitals and by the paucity of their attendances at the out-patient department for venereal disease, one cannot help thinking there must be a good deal of concealment of disease.

A most striking fact is that when this class of woman does come for hospital treatment it is usually for illnesses other than venereal.

- 31. Those who have had experience in the treatment of these unfortunate women fully realise that without some compulsion they will not come into hospital of their own free will and be treated as often as they should.
- 32. The Medical Officer, Kuantan, refers in his report to the hard lot of the Japanese prostitutes in Kuantan; he also writes "I was called on urgent message to see a Chinese prostitute, when I arrived the woman was in considerable pain, but as she was quite fit to send to hospital I advised her to go to hospital which she refused to do; as the orders of Government are so strict and unmistakable on the question of Medical Officers treating prostitutes in brothels I had no option but to refuse to treat."

SANITATION.

- 33. The sanitation of Pahang is in a somewhat backward condition.
- All Medical Officers are gazetted Health Officers, and the Medical Officer in Charge, Pahang, is Health Officer of the whole State.
- 34. In correspondence Pahang 825/1909 I asked that the Health Officers might be consulted before money voted under headings of town improvement, drainage of swamps, etc., was spent, but up to now nothing apparent has resulted. The present position of the Health Officers is not, I submit, satisfactory.

KUALA LIPIS.

The Kuala Lipis Sanitary Board consists of the District Officer as Chairman, other members of the Board being the Senior Medical Officer who is also Health Officer, State Engineer, Chief Police Officer, and two native members, there is also one overseer and five coolies for road scavenging. House refuse is not collected from the different quarters but has to be buried in the compounds. There is too much secondary jungle around most of the houses.

The water supply is from the river, and shallow surface wells, which run dry after a spell of 10-14 days without rain.

A chemical analysis of the water from these sources was made by the Government Analyst, Kuala Lumpur. His report was satisfactory.

Ice cannot be obtained except at great expense from Kuala Lumpur, and in time of serious illness both the patient and medical attendant are much handicapped.

RAUB.

35. More serious efforts at sanitation are attempted here, but the Board is much embarrassed by the want of adequate funds.

The water supply is somewhat of a compromise. An insufficient supply is conveyed in pipes which do not reach the Government quarters situated on hills where water has to be carried by manual labour.

The drains are mostly old and out of level, and a good many pools of water forming breeding places of mosquitoes are evident; as I have elsewhere reported malarial fever is very prevalent among the officials.

The number of mosquitoes within the town limits is very marked and renders the houses in the evenings most uncomfortable. I am of opinion that mosquito rooms should be provided to the different bungalows.

There is no block plan of the hospital, the buildings have been crowded together without much regard to future requirements; unfortunately, the land on the side of the hospital furthest away from the town, and the only possible direction for further extension of the hospital, has been given away, in spite of opposition from the Medical Department.

Although the occupied hills have from to time been cleared of secondary growth there has not been enough money to keep down the blukah.

BENTONG.

36. The sanitary condition of this town is more satisfactory, it is of comparative modern growth and has been well laid out.

The water supply is conveyed through pipes, it contains a good deal of iron which gets deposited in cooking utensils, bath tubs, etc. It is quite wholesome although somewhat unpalatable.

PEKAN.

37. The Malay capital is in much need of a proper water supply.

The hospital is a very old building, but money has been provided this year for its extension and repair. A small lunatic asylum is to be built here. The need for a Malay ward I have referred to elsewhere.

KUANTAN.

38. Kuantan is a prosperous port on the East Coast of Pahang, and the Health Officer there says, as the town is in the course of formation, it is very important that it should grow in a proper sanitary manner. He has, therefore, devoted a considerable part of his time to sanitation. It is regrettable that the Sanitary Board of so important a town as Kuantan does not possess a sanitary inspector or a clerk of its own, much extra work has, therefore, fallen on Dr. Reid and the hospital clerk, the hospital work has suffered in consequence.

Unfortunately, a serious outbreak of disease among animals (rinderpest and swine fever) also took up a good deal of Dr. Reid's time, but in the absence of veterinary assistance it is difficult to see what else could be done, it was obviously impossible to let the outbreak take care of itself, as should the buffaloes on the Pahang river have become infected by rinderpest, the loss to Malays and to the State would have been a calamity very far-reaching in its consequences.

39. Mr. Ford, Veterinary Surgeon, Selangor, paid two visits of some duration and did what he could to prevent the spread of the cattle disease. I forward Dr. Reid's report on this outbreak.

Towards the end of the year Mr. Thiagarajan was sent to help Dr. Reid, and on the 24th December the Veterinary Inspector arrived from India.

It is proposed to station the last-named officer for the present at Kuantan.

The services of Mr. Thiagarajan, who was on month-to-month agreement, have been dispensed with.

Owing to the difficulty of communicating with the East Coast it is not as easy to administer the department there as elsewhere, the more so as my visits to this portion of the State have been restricted to two a year.

THE GAOLS.

40. The health of the Kuala Lipis gaol has continued its reputation as being one of the healthiest institutions of its kind in the Federated Malay States. There was only one death (the first since 11-8-1906) in a prisoner who was transferred from Kuantan suffering from advanced beri-beri.

During the year 89 patients were admitted into the hospital, and the average daily number of sick works out to 3.06, and the percentage of deaths to total treated for all diseases was 1.09.

The average daily strength in the gaol was 62.24, the available accommodation for prisoners is, roughly, 100. Five hundred and seventy-one prisoners were treated as out-door patients, mostly for trivial ailments.

The prisoners are weighed every week, the majority gained in weight, and anyone who loses more than 3 lbs. is brought before the Medical Officer and also if there is a small but continuous loss. By this means it is possible to keep an accurate check on the health of the prisoners, it tells if the diet is sufficient, or the work excessive, and often leads to the diagnosis of early disease.

The growing of vegetables within the gaol walls for the use of the prisoners has added a good deal to their welfare, this is especially apparent in Lipis, where the food supply for the whole station is frequently deficient.

There are also small gaols at Pekan and Kuantan, the health of the prisoners at both these places has been good.

PRIVATE HOSPITALS.

41. The following return of cases treated in all the private hospitals in Pahang with percentage of deaths during 1909:

Hospital.	Cases treate	Deaths.	Percentage of deaths.		
	1909.		1909.	1909.	1908.
Pahang Consolidated Company, Sungei Lembing Chong Heng Kongsi, Gambang	322		49 46	 15.21 11.64	17.31 17.43
Blat Tin Mining Company, Blat (a) Pahang Rubber Company, Raub	78		8 27	 10.95 3.77	14.04 3.03
Loke Yew Estate, Kuala Pahang (b)	69		8	 11.59	10.18
Karak Rubber Estate, Bentong	7.00	***	3	 2.77	

- (a) Hospital was closed during June.
- (b) No patients treated July and August, they were sent to Government hospital at Pekan.
- (c) For October to December only, previously no reliable records were kept.

W.

By comparing with the returns for 1908 it will be seen that in the past year the mortality has decreased both at the Pahang Consolidated Company and Chong Heng Hospital, Gambang. I am of opinion that on estate hospitals, where ankylostomiasis is always present, the only intelligent way to diagnose and to treat this disease is with the microscope, which should be provided. The dressers in charge could soon be taught to use one, and so recognise the ova of the ankylostoma and also the malarial parasite.

METEOROLOGICAL RETURNS.

42. In Kuala Lipis the rainfall for 1909 was 97.35 inches, the previous year it reached 115.55 inches. The greatest rainfall in 24 hours was 4.61 inches on the 21st February, 1909.

The number of days without rain in Kuala Lipis was, in 1909, 228.

The highest temperature recorded during 1909 was 96°F on the 3rd April, 1909, the lowest, 60°F, on the 29th August, 1909. The mean temperature of Kuala Lipis was 78.5.

In Raub 82.33 inches of rain fell as against 93.27 in 1908. The maximum temperature registered was 93° F in March, April, May and October. The lowest temperature recorded was 63° F in February. The mean temperature at Raub was 79.5° F.

There is also a considerable amount of wind at this station in marked contrast to Kuala Lipis, where the air is generally uncomfortably still, except just a few minutes before there is rain. The moisture of the atmosphere of Kuala Lipis is without doubt greater than in any other town in the Federated Malay States.

Bentong had a rainfall of 97.82 inches and a mean temperature of 80.33°F.

Pekan had the heaviest rainfall during the year under review—viz., 158.75 inches. In January 32.33 inches fell. The mean temperature was 80.55°F.

Kuantan 113.99 inches fell. The mean temperature was 80.41°F.

At Temerloh, an inland station situated away from the influence of mountain ranges and from oceanic disturbances, the rainfall only amounted to 61.91 inches. The mean temperature was 82.3°F.

From the returns that have recently been especially prepared to show the difference of the rainfall on the eastern and western sides of the main mountain range, the following monthly averages, based on observations for the last seven years, are submitted:

					Petember February Inches.	August. Inches.		
Lipis		 		7.00	Sec. 1	 8.57		6.87
Raub	***	 455		de	***	 984		5.76
Benton	g	 ***		-		 9.84		5.41
Pekan		 ***		2000		 16.47		6.09
Kuanta	m	 		8		 12.32		5.76
Temerl	oh	 ***	***	The same		 7.45		4 82

These figures show that the towns on the East Coast during the north-east monsoon, prevailing during September to February, have a rainfall of nearly double that of the towns situated in the Ulu Pahang.

These facts should be of some value when the question of selecting a new capital is being finally considered.

GENERAL.

43. I took up my appointment as Medical Officer in Charge on the 12th February, relieving Dr. Fletcher, who had been acting for me until my return from leave.

Dr. Nicholas assumed his duties of Medical Officer, Raub, on the 21st January, 1909. He has to supervise Bentong hospital as well.

Dr. Reid arrived at Kuantan on the 23rd May, 1909, and relieved Dr. Leicester, who had been in charge of that district as well as his own (Pekan) since the death of Dr. Barrack.

Miss Sutton, Nurse, went on leave on the 29th September, 1909, and has not yet returned. Her place was not filled and her absence has caused a good deal of inconvenience. Life in Pahang is very isolated for European women, and the absence for any length of time of a properly trained nurse from their midst is a deprivation and in some instances a hardship. There are many women, the wives of the subordinate staff and others, who in times of travail and illness owe much to Miss Sutton. Apart from nursing Miss Sutton is teaching these women how midwifery cases should be conducted, these lessons are more effective when given by a woman, and will do much to dispel the present ignorance and prejudice. Such an influence, I submit, is helping the cause of civilization, and I would respectfully urge that the intention of taking our only trained nurse away may for the present at least be altered.

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S. C. G. FOX, Medical Officer in Charge.







