

## **Annual medical and sanitary report / Swaziland.**

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Swaziland. Medical Department.

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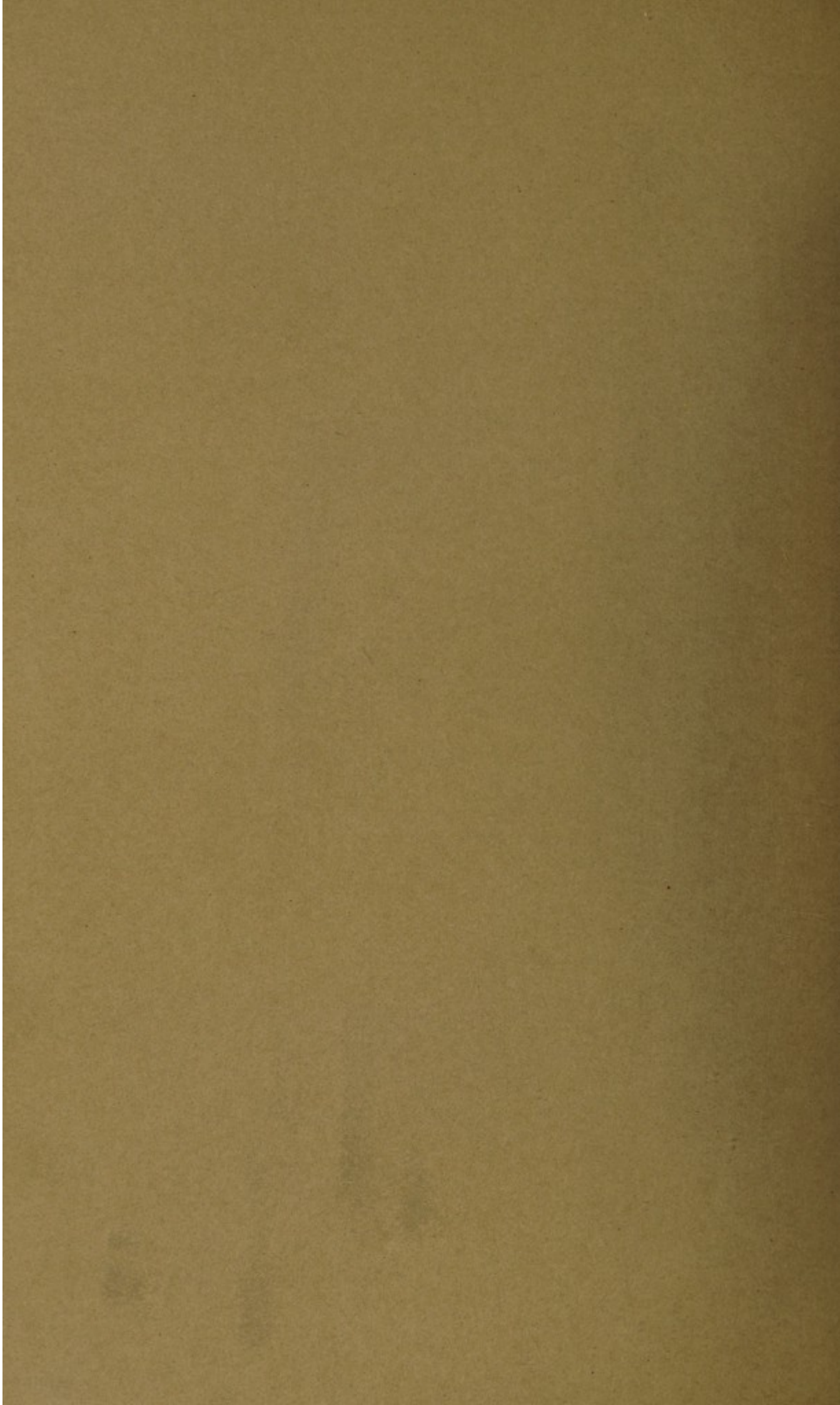
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Swaziland.



Annual Medical and  
Sanitary Report, 1938.





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ANNUAL MEDICAL AND SANITARY REPORT

- for the -

YEAR ENDED 31st DECEMBER, 1938.

I. ADMINISTRATION.

(a) STAFF.

EUROPEAN.

- 1 Principal Medical Officer.
- 3 Medical Officers.
- 2 Subsidized Medical Officers.
- 3 Hospital Assistants and Dispensers.
- 7 European Female Nurses.

NATIVE.

- 9 Male Nurses.
- 11 Female Nurses.
- 2 Cooks.
- 3 Laundresses.
- 2 Native mechanics and motor drivers.
- 6 Male Orderlies.

(b) PROCLAMATIONS ETC. AFFECTING PUBLIC HEALTH ENACTED DURING THE YEAR.

Nil.

(c) FINANCIAL.

The total expenditure on Medical and Sanitary

Services was £ 19,215. 7. 7

The total revenue was 802. 7. 6

The proportion of medical expenditure to the

total revenue of the Territory was 1 to 10.4

II. PUBLIC HEALTH



## GENERAL REMARKS.

The general health of Swaziland has been fair during 1938. There was an extensive epidemic of Whooping Cough throughout the Territory, which persisted for the greater part of the year. This is disquieting by reason of the increasing prevalence of pulmonary tuberculosis, and the known predisposition of Whooping Cough towards this disease.

There had been a marked falling-off in admissions of in-patients and attendances of out-patients at both Government Hospitals during the year, which was in part due to the diminution in the number of cases of malaria, but I am convinced that the frequent changes of Medical Officers was an important contributing factor.

Natives, much more than Europeans, dislike changing doctors, and once they have put confidence in a man, will travel long distances to consult him; conversely when a stranger takes over a hospital or dispensary they tend to keep away until they know something about the man.

### (1) COMMUNICABLE DISEASES.

#### Mosquito or Insect-borne.

Malaria. There was a marked decrease in the number of cases of malaria owing to unfavourable conditions for mosquito breeding, but as a result of the mild winter, cases of malaria were reported from the bush-veldt throughout the year.

This is unusual as malaria, except for occasional relapse cases, disappears about June and does not again become conspicuous till the succeeding January or February.

The persistence of malaria is disquieting in view of the large parasite reservoir thus afforded for the next malaria season.

### (2) INFECTIOUS DISEASES.

Syphilis. There has been a decrease in the number of cases of Syphilis treated, 384 during 1938 as against 586 in 1937; this, however, does not reflect the true position with regard to this disease, as it does not include all outpatients seen.

In the past it has been customary only to record details of diseases among patients at Hospitals, dispensaries and clinics as the difficulties of diagnosis at medical out-posts in charge of partially trained nurses have precluded the keeping of accurate records. I hope, however, next year to get more detailed figures of out-patients; particularly in regard to syphilis, malaria, and the other more important diseases.

Probably one of the chief factors in maintaining a high percentage of syphilis is the great amount of beer-drinking which goes on throughout the Territory, particularly around urban areas, and if this could be controlled both as to quantity and quality, the amount of venereal disease, would, I think decrease.

Schistosomiasis. (Bilharziasis). This disease is very prevalent in the middle and low-veldt, particularly in the Central District where 301 cases out of a total of 334 for the Territory were recorded.



Again, these figures do not anything like represent the incidence of the disease in Swaziland. There are numerous infected streams throughout the Central District, and it is impossible to prevent natives, particularly children, from bathing in them during the hot weather.

Enteric Fever. There was a marked increase in the number of enteric cases this year, chiefly in the Central District where 21 cases were reported out of a total of 35 for the Territory.

Two cases of enteric fever occurred at Mbabane, during the year, and it is surprising that this disease is not more common in this township, in view of its very unsatisfactory water-supply.

Mbabane is supplied for the most part with water from long furrows liable to contamination throughout their length; the water is run into two open reservoirs from which it is piped to most of the buildings. Some dwellings are still supplied direct from furrows. A safe water supply is urgently needed at Mbabane.

Dysentery. 25 cases of Bacillary Dysentery and 68 of Amoebic infection were recorded.

I am satisfied that a systematic examination of stools in all cases of diarrhoea would show a very considerable proportion of them to be due to amoebic infection. Unfortunately the small medical staff of the Territory is so fully occupied with routine medical work as to be unable to undertake any extensive research in this or in other directions.

Leprosy. Eight new cases of leprosy were recorded this year as against one during 1937, making a total of 27 known lepers.

As most of these cases were of long duration, I do not consider that there is any indication of the disease spreading to any extent but rather that lepers are presenting themselves for treatment more readily than in the past.

During July, Sir Walter Johnson, the Superintendent of the Leper Settlement at Botsabelo, in Basutoland, visited Swaziland to advise upon the leprosy position here.

In a most interesting and valuable report Sir Walter Johnson expressed the view that leprosy was still a rare disease in Swaziland and that an active campaign would prevent the spread and might even eradicate the disease. He recommended among other things, the appointment of a trained native leprosy inspector who would visit the relatives of all known lepers and endeavour to locate any early cases there might be, at the same time carrying out a propaganda campaign.

He advised the building of a new leper settlement to take the place of the present very primitive one and a suitable site for it was selected.

Sir Walter Johnson also advised upon the organisation and administration of the settlement and offered valuable suggestions for the comfort and welfare of the patients.

Tuberculosis. There was a very definite rise in the number of cases of Tuberculosis treated, the total being 201, of whom 95 were inpatients, as against 73 inpatients during 1937. Outpatients were not recorded in previous years.



In view of the unusual prevalence of whooping cough during the year, it seems possible that we may experience a sharp rise in pulmonary tuberculosis particularly among native children, during 1939.

The problem of tuberculosis is wrapped up with so many others; malnutrition, syphilis, malaria, and a poor standard of living, all play their part in lowering the resistance and rendering natives more susceptible to the ravages of this disease. For this reason it would appear that, at the moment, the best means of attacking the disease is by combating these predisposing factors. Institutional treatment would, I fear, be a financial impossibility; and in any case, very many cases would relapse after discharge from a sanatorium, when economic pressure forced them to enter the labour market to earn a living.

#### VITAL STATISTICS.

- |     |  |         |
|-----|--|---------|
| (1) | General Native Population,   | 154,250 |
|     | Registration is not compulsory and no figures about birth rate, death rate or infant mortality can be given. |         |
| (2) | General European Population Census figures,  | 2,950   |
| (3) | Coloured Population,   | 750     |
| (4) | European Officials. - Table Showing The Sick, Invaliding, and Death Rates of European Officials.             |         |

	<u>1936</u>	<u>1937</u>	<u>1938</u>
Total number of officials resident	102.00	106.00	110.00
Average number resident,	98.00	101.00	105.00
Total number on sick leave,	4.00	4.00	5.00
" " of days of sick leave granted,	111.00	456.00	203.00
Average daily number on sick list	.30	1.25	.013
Percentage of sick to average number resident	.30	1.20	.013
Average number of days on sick list for each patient	27.75	114.00	40.60
Average sick time to each resident	1.09	4.30	1.84
Total number invalided	-	1.00	-
Percentage of invalided to total residents	-	.94	-
Total deaths	1.00	-	-
Percentage of deaths to total residents	.98	-	-
Percentage of deaths to total average number of residents	1.02	-	-
Number of cases of sickness contracted away from residence	-	-	-



- (5) Native Officials. - Table showing the Sick, Invaliding, and Death Rates of Native Officials.

	<u>1936</u>	<u>1937</u>	<u>1938</u>
Total number of residents	160.00	-	165.00
Average number of residents	156.00	-	160.00
Total number on sick leave	5.00	7.00	4.00
"    "    of days of sick leave granted	203.00	-	183.00
Average daily number on sicklist	.55	.75	1.85
Percentage of sick to average number resident	.35	.68	1.23
Average number of days sick leave for each patient	40.60	42.10	7.36
Average sick time to each resident	1.27	3.20	4.34
Total number invalided,	-	-	-
Percentage of invalided to total residents	-	-	-
Total deaths	1.00	-	-
Percentage deaths to average number resident	64.00	-	-
No. of cases of sickness contracted away from residence	-	-	-

### III. HYGIENE AND SANITATION.

#### (a) GENERAL REVIEW OF WORK DONE AND PROGRESS MADE.

##### (1) PREVENTATIVE MEASURES:

Mosquito and Insect-borne Diseases. Malaria is the only disease of any importance under this category in Swaziland.

During May I visited Natal and Zululand to study Anti-Malaria measures which have proved very successful there over a period of years. These measures concern themselves in the main with attacking the adult *A. Gambiae*, in all buildings in the controlled area, by means of suitable insecticide spraying at regular intervals.

As conditions in Swaziland approximate very closely to those in Zululand, a scheme on similar lines was put forward for this country, but unfortunately for financial reasons, it was not found possible to bring it into operation during this year.

Towards the end of the year when it became apparent that a very serious epidemic of malaria was to be expected, warnings were issued in the press and through District Officers, and advice was given as to what measures could be taken to prevent infection.

Arrangements were also made for the distribution of quinine. Under the circumstances this was all we could do, but I feel that in the future a definite active anti-malarial campaign will prove medically and economically more satisfactory than simply relying upon palliative measures.



Vaccinations. During the winter months a vaccination campaign was carried out, chiefly along the Northern Border and in the Central District. A total of 34,220 vaccinations were performed. The whole of the Territory has now been protected during the past 3 years and it remains only to deal with those who, for various reasons, escaped vaccination, and with the infants and newcomers since the campaign.

#### EPIDEMIC DISEASES.

Whooping Cough. An extensive and prolonged epidemic of whooping cough affected very many children throughout the Territory, in fact the disease prevailed throughout the year, 83 cases were reported as against 22 for last year; but these only represent a very small proportion of the actual cases, since very many did not come for treatment, and others came as outpatients at medical outposts and are recorded only in the total of outpatients.

Measles. A few cases of measles and influenza were also reported, but they did not exceed the normal annual incidence of these diseases.

#### (2) GENERAL MEASURES OF SANITATION.

##### Water Supplies.

Provision has been made for a more satisfactory water-supply at Goedegun, but the work had not yet been taken in hand at the end of the year under review. It is hoped, however, that the installation will be completed during 1939.

Stegi and Mbabane water-supplies are far from satisfactory, and it is a matter of great importance that the danger to public health arising from these causes should be removed as soon as possible.

At Mbabane with its greater population, its open furrows liable to pollution over considerable distances, and the presence of a large European school, the need is most urgent.

#### (3) SCHOOL HYGIENE.

European School Children. The health of European school children in the highlands continues to be satisfactory, but in the Bush-veldt a very different state of affairs exists. Here Malaria and Bilharzia are very prevalent, and the majority of children are debilitated, and anaemic as a result of one or both of these diseases.

There is too, a greater degree of Malnutrition among children in these parts of the country.

The same remarks apply to a great extent to the native school children.

During the year the Medical Officer, Mbabane, carried out an investigation into the physical state of the pupils of the Swazi National School at Matapa. It is perhaps premature to draw conclusions from investigations over one year only but the indications are that boarders gain weight considerably during term time, and either remain stationary or lose weight during the holidays; the converse applies to day pupils.

The report is of such interest that I am submitting it in full as an appendix to this Report.

Owing to the small Medical Staff in the Territory it is quite impossible for Medical Officers to carry out regular and systematic school inspections, so it will be difficult to pursue this investigation at other schools.



Dental caries is common among European and Native children alike, and facilities for dental attention are practically non-existent. Medical Officers do extractions when necessary, and a visiting dentist comes to Mbabane and Bremersdorp twice a year for a week or two, but his time being limited, his services are only available for a few European children as private patients. The need for a resident dentist in the Territory is obvious and urgent. It might be possible to induce a suitable dentist to practice in Swaziland if he could be given a part-time Government appointment.

(4) LABOUR CONDITIONS.

There is no compulsory medical examination of native labour recruited either for the Gold Mines in Johannesburg or the mines in the Territory.

The Havelock Asbestos Mine probably absorbs most local labour, but quite a considerable number of natives are employed on tin mines in various parts of Swaziland. It would be eminently desirable from many points of view that all native labour recruited for work on the mines, whether in Swaziland or elsewhere, should be medically examined before engagement. The whole question merits careful consideration and it is hoped to submit a separate report after further examination.

(5) HOUSING.

Though the housing of officials in many instances leaves a great deal to be desired, efforts are being made by replacing the worst quarters and repairing others, as funds permit, to improve matters in this direction.

(b) MEASURES TAKEN TO SPREAD THE KNOWLEDGE OF HYGIENE AND SANITATION.

A certain amount of instruction is given in schools in the rudiments of hygiene.

Native nurses, in the course of their training at the Raleigh Pitkin Memorial Hospital, all get some instruction in these subjects.

(c) TRAINING OF SANITARY PERSONNEL.

No such training is carried out as there is no Sanitary Inspector on the staff to undertake this training.

(d) RECOMMENDATIONS FOR FUTURE WORK.

**Anti-malaria Measures.** Malaria is, in Swaziland, a very important disease both from a medical and economic point of view, and the greater part of the Territory lend itself to the control of the disease by a systematic anti-adult mosquito campaign. I would strongly urge that active and thorough operations should be undertaken to control this menace to the health and progress of this country.

Detailed proposals to this end were submitted during the year.

A new leper settlement is urgently necessary, the existing one not offering sufficient or satisfactory accommodation for the patients presenting themselves voluntarily for treatment. A suitable site has been selected and details of the lay-out have been worked out.



#### IV. PORT HEALTH WORK AND ADMINISTRATIVE.

##### Medico-legal Work.

65 Post mortem examinations.

97 Medico-legal examinations in the Northern District.

No figures are available for the latter in the Southern and Central Districts.

It will be seen from the above figures that Medico-legal work forms no small part of the duties of a Medical Officer, particularly in the Northern District, and when it is realized that many of the post mortem examinations are made in remote places where the Medical Officer had to travel on horseback or on foot, it will be appreciated how much time is spent in travelling on these duties. During 1938, more than 60 days were occupied on Medico-legal work alone, in the Northern District, most of which time was taken up in travelling.

#### V. MATERNITY AND CHILD WELFARE.

The importance of this branch of preventive medicine is fully realised and every effort is being made to extend it as much as possible.

The Child Welfare Clinic at Bremersdorp continues to do admirable work as the following figures indicate :-

Child Welfare attendances,	2,682
Ante-natal examinations,	1,754
Deliveries,	203
Mothers attending clinics,	288

Ante-natal examinations are carried out at all hospitals and dispensaries, and Wasserman tests are done as a routine in these cases.

#### VI. HOSPITALS, DISPENSARIES AND VENEREAL CLINICS.

The accommodation in both Government hospitals has been taxed to the limit during the greater part of the year. At Mbabane, with a capacity of 25 beds the daily average was 46 and the highest daily total, 61, while at Hlatikulu the figures were: daily average - 35, highest daily total was 86, for 50 beds.

The accommodation at Hlatikulu Hospital was increased in 1937, and it is proposed to ask for funds to extend the Mbabane Hospital during 1939.

##### Raleigh Fitkin Memorial Hospital.

The Raleigh Fitkin Memorial Hospital continues to do most excellent work.

This hospital, situated in the middle of the Territory, is most admirably placed to deal with the medical needs of the Bush-veldt and under the admirable direction of its energetic and able Medical Superintendent, this hospital has contributed most valuably to the medical needs of the Territory.



The Medical Outpost at St. Phillips Mission in the Southern District was opened during the year; this medical outpost was erected by the Mission at their own expense, and is under the charge of a European nurse. The Administration provides an annual subsidy.

The Hluti Dispensary was also completed during the year but difficulty has been experienced in obtaining a suitable European nurse to take charge, and the post had not been filled at the end of the year. It is hoped, however, to fill this vacancy early in the ensuing year.

The total of dispensaries or clinics under the charge of Europeans (including Hluti) is now 6, and Medical Outposts under native nurses, 5.

These medical stations are all doing excellent work and it is proposed in certain instances where the natives have asked for such accommodation, to provide one or two huts for maternity cases.

It is most gratifying to find that natives are asking for this provision to be made, and I look forward to arranging for maternity cases to be attended at all medical outposts before long.

The treatment of syphilis forms an important part of the work of all outpatient Departments, dispensaries and medical outposts.

Several of the native nurses in charge of medical outposts have been trained to give intravenous injections of N.A.B. and it is hoped in time to train all of them to carry on this form of treatment.

No untoward results have followed from these nurses administering this form of treatment.

#### VII. PRISONS AND ASYLUMS.

The health of the prisoners has been satisfactory and no outbreaks of communicable diseases have occurred among them.

Hlatikulu goal has been enlarged during the year, and proposals have been submitted for increasing the accommodation at the Mbabane Goal.

The position as regards mental patients remains in the same unsatisfactory state.

Dangerous patients are sent to Institutions in the Union, and other troublesome cases are detained in the gaols in the Territory.

It has proved in most cases quite impracticable to leave these unfortunate people to the care of their relations or headmen who simple do not attempt to look after them, and so responsibility for their safety almost invariably devolves upon the Administration.

A mental hospital for Swaziland is, I fear, quite out of the question, owing to the expenditure involved, but a central institution for all three High Commission Territories might be quite a feasible proposition, and seems to merit serious consideration.

TABLE I.

Dr. D. Drew	Principal Medical Officer
Dr. F. Keen	Medical Officer
Dr. G.W. Brammer	Medical Officer
Dr. F. Bourgault de Coudray	Medical Officer
Dr. J.B. Tasker	Medical Officer
Dr. T.D. MacNab	Medical Officer



SUBSIDIZED DOCTORS.

Dr. D. Hynd	Bremersdorp
Dr. Du Toit	Bremersdorp

PRINCIPAL MEMBERS OF THE SUBORDINATE STAFF.

Mr. A.G. Lunnis	Hospital Assistant and Dispenser
Mr. C.B. Hands	Hospital Assistant and Dispenser
Dr. O. Mastbaum	Hospital Assistant and Dispenser
Mr. J.L. Van der Vyver	Hospital Assistant and Dispenser
Mrs. A.S. Van Niekerk	Nurse
Miss F. D'Arcy	"
Miss E. Leamy	"
Miss L.J. Vialls	"
Miss M.M. Hunter	"
Miss M. MacLaren	"
Miss Anderson	"
Miss M. Thompson	"
Miss H.R. Bradwell	"

SUBSIDIZED.

Nurse in charge of the Mission Dispensary at Stegi.  
Nurse in charge of the Mission Dispensary at Ndingeni  
Nurse in charge of the Mission Dispensary at Piggs Peak

PRINCIPAL CHANGES IN STAFF.

Dr. D. Drew succeeded Dr. R. Jamison as Principal Medical Officer on the 1st February, 1938.

Dr. G.W. Brammer and Dr. F. Bourgault left the Service and were succeeded by Dr. J.B. Tasker and Dr. T.D. Macnab.

Dr. F. Pulss (who died at Hlatikulu) and Dr. I. Bente acted as temporary Medical Officers for short periods, pending the appointment of successors to Dr. G.W. Brammer and Dr. F. Bourgault. Mr. J.L. Van der Vyver succeeded Mr. J. Nathanson (who resigned) as dispenser at Hlatikulu, and Dr. O. Mastbaum was appointed to fill a similar vacancy at Mbabane caused by the resignation of Mr. C.B. Hands.

Among the nurses, Nurse E. Leamy, Nurse L.J. Vialls, and Nurse Judd resigned and were succeeded by Nurses M.V. Read, M. Thompson and H.R. Bradwell.

NATIVE STAFF.

9 Male Nurses  
11 Female Nurses  
2 Cooks  
3 Laundresses  
2 Mechanics and Motor Drivers  
6 Male Orderlies.

TABLE II.

## FINANCIAL.

Expenditure:

Personal Emoluments	£ 9111. 8. 6
Travelling Expenses	1456.19. 4
Allowances and Fees	26. 4.10
Maintenance of Patients	7309.13.10
Equipment for Hospitals	694.15. 8
Ambulance for Hlatikulu	345. 0. 0
Uniform for Native Staff	95. 9. 5
Vaccination	142. 2. 6
Bursary - Native student at Fort Hare	33.13. 6
	<hr/>
	£19215. 7. 7
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Revenue :-

£ 802. 7. 6

TABLE III.

The only records are those of the births and deaths of Europeans.

TABLE IV.

Meteorological Return for the year 1938.

Station - MBABANE.

Long. 31°9"	Lat. 26°19"			Alt. 3,800 Feet.
	Temperature			Rainfall
	Max.	Min.	Mean.	Inches
January	75.9	59.5	67.7	9.80
February	75.9	57.9	66.9	6.90
March	76.2	55.9	66.1	2.97
April	72.9	55.2	64.1	6.07
May	69.2	49.2	59.2	0.84
June	63.3	44.0	53.7	2.11
July	64.8	43.3	54.1	1.53
August	66.9	46.1	56.5	1.13
September	73.8	49.0	61.4	3.70
October	74.1	55.6	64.9	4.65
November	75.1	54.8	65.0	3.93
December	74.8	58.2	66.5	8.26
Totals	71.9	52.4	62.2	51.89

Station - KUBUTA.

Long. 31°29"	Lat. 26°53"			Alt. 2,300 Feet
	Temperature			Rainfall
	Max.	Min.	Mean.	Inches
January	85.2	66.3	75.8	3.33
February	82.9	65.0	73.5	2.41
March	85.1	63.7	74.4	3.18
April	79.1	62.9	71.0	8.28
May	75.6	56.9	66.3	0.00
June	72.2	52.2	62.2	1.55
July	70.8	51.3	61.1	0.57
August	74.5	54.3	64.4	0.88
September	79.5	56.5	68.0	2.90
October	81.1	61.7	71.4	4.68
November	83.6	60.1	71.9	3.50
December	81.5	63.2	72.4	19.02
Totals	79.3	59.5	69.4	50.30



TABLE V.  
RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1938.

Diseases	Remaining in Hospital at end of 1937	Yearly Total		† Total Cases Treated	‡ Remain- ing in Hospital at end of 1938	Remarks
		Admissions	Deaths			
<u>I.-Epidemic, Endemic, and Infectious Diseases.</u>						
1. Enteric Group -						
(a) Typhoid Fever.	2	19	3	21	2	
(b) Paratyphoid A.						
(c) Paratyphoid B.						
(d) Type not defined.						
2. Typhus.	-	2	-	2	-	
3. Relapsing Fever.	-	1	-	1	-	
4. Undulant Fever.						
5. Malaria -	4	247	5	251	6	
(a) Tertian.						
(b) Quartan.						
(c) Aestivo-autumnal.						
(d) Cachexia.						
(e) Blackwater.	-	2	-	2	-	
6. Smallpox - Alastrim.						
7. Measles.	2	40	-	42	-	
8. Scarlet Fever.	1	2	1	3	-	
9. Whooping Cough.	-	46	-	46	-	
10. Diphtheria.	-	2	-	2	-	
11. Influenza.	-	53	-	53	2	
12. Miliary Fever						
13. Mumps.						
14. Cholera.						
15. Epidemic Diarrhoea.						
16. Dysentery.						
(a) Amoebic.	2	21	3	23	11	
(b) Bacillary.	-	11	1	11	1	
(c) Undefined or due to other causes.						
17. Plague -						
(a) Bubonic.						
(b) Pneumonic.						
(c) Septicaemic.						
(d) Undefined.						
18. Yellow Fever.						
19. Spirochaetosis ictero- haemorrhagica						
20. Leprosy.	-	3	-	3	-	
21. Erysipelas.	-	1	-	1	-	
22. Acute Poliomyelitis.						
23. Encephalitis Lethargica.	-	1	-	1	-	
24. Epidemic Cerebro-spinal Fever						
25. Other Epidemic Diseases.						
(a) Rubella (German Measles)						
(b) Varicella (Chicken-pox)	-	1	-	1	-	
(c) Kala-azar.						
(d) Phlebotomus Fever.						
(e) Dengue.						
(f) Epidemic Dropsy						
(g) Yaws.						
(h) Trypanosomiasis.						
Total carried forward	11	452	13	463	22	

The form shows in the main the arrangement of diseases in the International Nomenclature, 1921 Edition. To save space the unimportant diseases of any class can be grouped in their places as "Other Diseases" of the Class.

\* 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.



## RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1938.

Diseases	Remaining in Hospital at end of 1937	Yearly Total		† Total Cases Treated	‡Remain- ing in Hospital at end of 1938	Remarks
		Admissions	Deaths			
Brought forward	11	452	13	463	22	
<u>1.-Epidemic, Endemic, and Infectious Diseases</u> (Contd)						
26. Glanders.						
27. Anthrax.	-	5	-	5	-	
28. Rabies.						
29. Tetanus.	-	10	-	10	1	
30. Mycosis.						
31. Tuberculosis, Pulmonary and Laryngeal.	-	46	4	46	4	
32. Tuberculosis of the Meninges or Central Nervous System.	-	1	-	1	-	
33. Tuberculosis of the Intestines or Peritoneum.	-	3	-	3	-	
34. Tuberculosis of the Vertebral Column.	-	4	-	4	1	
35. Tuberculosis of Bones and Joints	-	18	1	18	3	
36. Tuberculosis of other organs -						
(a) Skin or Subcutaneous Tissue (lupus).						
(b) Bones.						
(c) Lymphatic System.	1	7	-	8	-	
(d) Genito-urinary.						
(e) Other organs.	-	1	-	1	-	
37. Tuberculosis disseminated-						
(a) Acute						
(b) Chronic						
38. Syphilis -	39	290	10	329	40	
(a) Primary						
(b) Secondary						
(c) Tertiary						
(d) Hereditary.	-	2	-	2	-	
(e) Period not indicated						
39. Soft Chancre.						
40. A.- Gonorrhoea and its complications.	-	22	1	22	1	
B.- Gonorrhoeal Ophthalmia.	-	2	-	2	-	
C.- Gonorrhoeal Arthritis	-	2	-	2	-	
D.- Granuloma Venereum						
41. Septicaemia.	-	2	1	2	-	
42. Other Infectious Diseases - Trypanosomiasis						
<u>II. General Diseases not     mentioned above.</u>						
43. Cancer or other malignant Tumours of the Buccal Cavity	1	5	-	6	1	
44. Cancer or other malignant Tumours of the Stomach or Liver.	1	1	2	2	-	
Total carried forward	53	873	32	926	73	
		13.				

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1938.

Diseases.	Remaining in Hospital at end of 1937	Yearly Total		† Total Cases Treated	‡ Remain- ing in Hospital at end of 1938	Remarks
		Admissions	Deaths			
Brought forward	53	873	32	926	73	
II. <u>General Diseases not mentioned above</u> (Contd)						
45.Cancer or other malignant Tumours of the Peritoneum Intestines, Rectum	-	2	1	2	-	
46.Cancer or other malignant Tumours of the Female Genital Organs.	-	1	-	1	-	
47.Cancer or other malignant Tumours of the Breast.						
48.Cancer or other malignant Tumours of the Skin.	1	2	1	3	-	
49.Cancer or other malignant Tumours of the Organs not specified.						
50.Tumours non-Malignant	2	23	4	25	-	
51.Acute Rheumatism.	-	3	-	3	-	
52.Chronic Rheumatism.						
53.Scurvy (including Barlow's Disease)	1	15	-	16	-	
54.Pellagra.	-	4	-	4	-	
55.Beri-Beri.	-	1	-	1	-	
56.Rickets.	-	1	-	1	-	
57.Diabetes (not including Insipidus)	-	6	-	6	1	
58.Anaemia -						
(a) Pernicious						
(b) Other Anaemias and Chlorosis.	-	1	-	1	-	
59.Diseases of the Pituitary Body.						
60.Diseases of the Thyroid Gland -	2	7	-	9	-	
(a) Exophthalmic Goitre						
(b) Other diseases of the Thyroid Gland, Myxoedema.						
61.Diseases of the Para-Thyroid Glands.						
62.Diseases of the Thymus.						
63.Diseases of the Supra-Renal Glands.						
64.Diseases of the Spleen						
65.Leukaemia -						
(a) Leukaemia -						
(b) Hodgkin's Disease.						
66.Alcoholism.						
67.Chronic poisoning by mineral substances (lead,mercury,&c.)						
Total carried forward	59	939	38	998	74	
		14.				



## RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1938.

Diseases	Remaining in Hospital at end of 1937	Yearly Total		† Total Cases Treated	‡ Remain- ing in Hospital at end of 1938	Remarks
		Admissions	Deaths			
Brought forward	59	939	38	998	74	
II - General Diseases not mentioned above. (Contd.)						
68. Chronic poisoning by organic substances (Morphia, Cocaine, &c.)						
69. Other General Diseases - Auto-intoxication Purpura Haemorrhagica. Haemophilia. Diabetes Insipidus.	-	2	1	2	-	
III. - <u>Affections of the Nervous System and Organs of the Senses.</u>						
70. Encephalitis (not includ- ing Encephalitis Lethargica).						
71. Meningitis (not including Tuberculous Meningitis or Cerebro-spinal Meningitis	-	3	2	3	-	
72. Locomotor Ataxia.						
73. Other affections of the Spinal Cord.	-	2	-	2	-	
74. Apoplexy - (a) Haemorrhage. (b) Embolism. (c) Thrombosis.						
75. Paralysis - (a) Hemiplegia. (b) Other Paralysees	-	2	-	2	-	
76. General Paralysis of the Insane						
77. Other forms of Mental Alienation.	-	7	-	7	1	
78. Epilepsy.	1	10	-	11	-	
79. Eclampsia, Convulsion (non-puerperal) 5 years or over.						
80. Infantile Convulsions.						
81. Chorea.						
82. A. - Hysteria. B. - Neuritis. C. - Neurasthenia.	-	3	-	3	1	
83. Cerebral Softening.						
84. Other affections of the Nervous System, such as Paralysis Agitans.						
85. Affections of the Organs of Vision - (a) Disease of the Eye (b) Conjunctivitis. (c) Trachoma. (d) Tumours of the Eye (e) Other affections of the Eye.	-	17	-	17	-	
	-	6	-	6	1	
Total carried forward	60	981	41	1051	77	

## RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1938.

Diseases.	Remaining in hospit- al at end of 1937.	Yearly Total'		†Total Cases Treated	‡Remaining in hospit- al at end of 1938.	Remarks.
		Admissions	Deaths			
Brought forward	60	981	41	1051	77	
III. <u>Affections of the Nervous System and Organs of the Senses (Contd.)</u>						
86. Affections of the Ear or Mastoid Sinus	-	10	-	10	2	
IV. - <u>Affections of the Circulatory System.</u>						
87. Pericarditis	-	2	-	2	-	
88. Acute Endocarditis or Myocarditis.	-	11	-	11	-	
89. Angina Pectoris	-	1	-	1	-	
90. Other Diseases of the Heart -						
(a) Valvular						
Mitral						
Aortic						
Tricuspid						
Pulmonary						
(b) Myocarditis	-	2	2	2	-	
91. Diseases of the Arteries -						
(a) Aneurism						
(b) Arterio- Sclerosis	-	1	-	1	-	
(c) Other Diseases						
92. Embolism or Thrombosis (non cerebral)						
93. Diseases of the Veins -						
Haemorrhoids						
Varicose Veins						
Phlebitis	-	2	-	2	-	
94. Diseases of the Lymphatic System						
Lymphangitis						
Lymphadenitis, Bubo (non- specific)						
95. Haemorrhage of undetermined cause.						
96. Other affections of the Circu- latory System	-	3	-	3	-	
Total carried forward	60	1024	43	1084	79	



## RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1938.

Diseases.	Remaining in hospit- al at end of 1937.	Yearly Total		†Total Cases Treated	‡Remaining in hospit- al at end of 1938.	Remarks
		Admissions	Deaths			
Brought forward	60	1024	43	1084	79	
<b>V. - <u>Affections of the Respiratory System</u></b>						
97. Diseases of the Nasal Passages -						
Adenoids	-	1	-	1	-	
Polypus.	-	1	-	1	-	
Rhinitis	-	1	-	1	-	
Coryza	-	1	-	1	-	
98. Affections of the Larynx -						
Laryngitis	-	20	-	20	-	
99. Bronchitis -						
(a) Acute	-	2	-	2	-	
(b) Chronic						
100. Broncho-Pneumonia	-	11	1	11	2	
101. Pneumonia -						
(a) Lobar	2	15	2	17	1	
(b) Unclassified	1	12	1	13	-	
102. Pleurisy, Empyema	4	11	-	15	-	
103. Congestion of the Lungs						
104. Gangrene of the Lungs						
105. Asthma	5	13	-	18	-	
106. Pulmonary Emphysema						
107. Other Affections of the Lungs. -						
Pulmonary Spirochaetosis						
<b>VI. - <u>Diseases of the Digestive System.</u></b>						
108. A. - Diseases of Teeth or Gums- Caries, Pyorrhoea, &c.	3	41	-	44	-	
B. - Other affect- tions of the Mouth -	-	1	-	1	-	
Stomatitis	-	2	2	2	-	
Glossitis, &c.						
109. Affections of the Pharynx or Tonsils -						
Tonsillitis	4	24	-	28	-	
Pharyngitis	1	2	-	3	-	
110. Affections of the OEsophagus.						
111. A. - Ulcer of the Stomach	-	1	-	1	-	
B. - Ulcer of the Duodenum	-	3	-	3	-	
Total carried forward	80	1186	49	1266	82	

## RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1936.

Diseases.	Remaining in hospital at end of 1937.	Yearly Total		† Total Cases Treated	‡ Remaining in hospital at end of 1938.	Remarks.
		Admissions	Deaths			
Brought forward	80	1186	49	1266	82	
<u>VI Diseases of the Digestive System (Contd.)</u>						
112. Other affections of the Stomach						
Gastritis	-	9	-	9	-	
Dyspepsia, &c.	1	5	-	6	-	
113. Diarrhoea and Enteritis-						
Under two years	1	8	-	9	-	
114. Diarrhoea and Enteritis-						
Two years and over	2	24	-	26	1	
Colitis	2	10	-	12	-	
Ulceration	1	9	-	10	-	
114a Sprue						
115. Ankylostomiasis						
116. Diseases due to Intestinal Parasites-						
(a) Cestoda (Taenia)	2	29	-	31	-	
(b) Trematoda (Flukes)						
(c) Nematoda (Other than Ankylostoma)						
Ascaris	-	2	-	2	-	
Trichocephalus dispar						
Trichina						
Dracunculus						
Strongylus						
Oxyuris	-	2	-	2	-	
(d) Coccidia						
(e) Other parasites	-	1	-	1	-	
(f) Unclassified						
117. Appendicitis	-	10	-	10	-	
118. Hernia	1	8	-	9	-	
119. A- Affections of the Anus,						
Fistula, &c.,	-	2	-	2	-	
B- Other affections of the Intestines-						
Enteroptosis	1	2	-	3	-	
Constipation	2	7	-	9	-	
120. Acute Yellow Atrophy of the Liver						
121. Hydatid of the Liver	-	2	1	2	-	
122. Cirrhosis "						
(a) Alcoholic						
(b) Other forms	-	1	-	1	-	
123. Biliary Calculus						
124. Other affections of the Liver -						
Abscess	1	9	-	10	-	
Hepatitis	-	1	-	1	-	
Cholecystitis	-	2	-	2	-	
Jaundice						
125. Diseases of the Pancreas						
126. Peritonitis (of unknown cause)	-	8	1	8	-	
127. Other affections of the Digestive System	-	1	-	1	-	
<u>VII- Diseases of the Genito-urinary System (non-Veneral).</u>						
128. Acute Nephritis	-	9	3	9	1	
129. Chronic	-	1	-	1	-	
130. A.- Chyluria						
B.- Schistosomiasis	2	36	1	38	1	
Total carried forward	96	1384	55	1480	85	



## RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1936.

Diseases.	Remaining in hospital at end of 1937.	Yearly Total		Total Cases Treated	*Remaining in hospital at end of 1938.	Remarks.
		Admissions	Deaths			
Brought forward	96	1384	55	1480	85	
<u>VII - Diseases of the Genito-urinary System (Non-Veneral) (Contd)</u>						
131. Other affections of the Kidneys - Pyelitis, &c.	-	1	-	1	-	
132. Urinary Calculus.						
133. Diseases of the Bladder- Cystitis	1	10	1	11	-	
134. Diseases of the Urethra- (a) Stricture (b) Other	-	3	1	3	-	
135. Diseases of the Prostate - Hypertrophy Prostatitis						
136. Diseases (non-Veneral) of the Genital Organs of Man - Epididymitis	-	5	-	5	-	
Orchitis	-	4	-	4	-	
Hydrocele	-	5	-	5	-	
Ulcer of Penis	-	5	-	5	-	
137. Cysts or other non-malignant Tumours of the Ovaries	-	2	-	2	-	
138. Salpingitis - Abscess of the Pelvis	3	30	-	33	4	
139. Uterine Tumours (non-malignant)	-	3	-	3	-	
140. Uterine Haemorrhage (non-puerperal)	-	8	-	8	-	
141. A. - Metritis	-	2	-	2	-	
B. - Other affections of the Female Genital Organs- Displacements of Uterus	-	7	-	7	-	
Amenorrhoea	-	1	-	1	-	
Dysmenorrhoea	-	2	-	2	-	
Leucorrhoea	1	11	-	12	1	
142. Diseases of the Breast (non-puerperal)- Mastitis	-	1	-	1	-	
Abscess of Breast	-	3	-	3	-	
Breast	-	3	-	3	-	
<u>VIII - Puerperal State</u>	-	8	-	8	1	
143. A. - Normal Labour	16	234	2	250	14	
B. - Accidents of Pregnancy - (a) Abortion	1	13	-	14	-	
(b) Ectopic Gestation						
(c) Other accidents of Pregnancy	-	8	-	8	-	
144. Puerperal Haemorrhage						
145. Other accidents of Parturition						
146. Puerperal Septicaemia	1	1	-	2	-	
147. Phlegmasia Dolens	-	3	2	3	-	
148. Puerperal Eclampsia						
149. Sequelae of Labour	-	5	1	3	1	
150. Puerperal affections of the Breast	-	3	-	3	-	
Total carried forward	119	1753	62	1872	106	
		19.				

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1938.

Diseases	Remaining in hospital at end of 1937.	Yearly Total		† Total Cases Treated	‡ Remaining in hospital at end of 1938.	Remarks.
		Admissions	Deaths			
Brought forward	119	1753	62	1872	106	
<u>IX. - Affections of the Skin and Cellular Tissues.</u>						
151. Gangrene.						
152. Boil.-	-	14	-	14	-	
Carbuncle	-	3	-	3	-	
153. Abscess -	-	2	-	2	-	
Whitlow	-	9	-	9	1	
Cellulitis	2	37	-	39	3	
154. A. - Tinea						
B. - Sabies	1	6	-	7	2	
155. Other Diseases of the Skin -	-	8	-	8	-	
Erythema						
Urticaria						
Eczema	-	5	-	5	-	
Herpes						
Psoriasis						
Elephantiasis	-	3	-	3	-	
Myiasis						
Chigoes						
Cutaneous						
Leishmaniasis						
<u>X. - Diseases of Bones and Organs of Locomotion (other than Tuberculous).</u>						
156. Diseases of Bones -						
Osteitis	2	12	-	14	4	
157. Diseases of Joints -						
Arthritis	-	16	-	16	1	
Synovitis	-	1	-	1	1	
158. Other Diseases of Bones or Organs of Locomotion	-	6	-	6	-	
<u>XI. - Malformations</u>						
159. Malformations-						
Hydrocephalus						
Hypospadias	-	1	-	1	-	
Spina Bifida, &c.						
Total carried forward	124	1877	62	2001	118	



RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1938.

Diseases	Remaining in hospital at end of 1937.	Yearly Total		† Total Cases Treated	# Remaining in hospital at end of 1938.	Remarks.
		Admissions	Deaths			
Brought forward	124	1877	62	2001	116	
<u>XII. - Diseases of Infancy.</u>						
160. Congenital Debility						
161. Premature Birth	-	7	6	7	-	
162. Other affections of Infancy						
163. Infant neglect (infants of three months or over)	1	8	1	9	7	
<u>XIII. - Affections of Old Age.</u>						
164. Senility - Senile Dementia	1	4	2	5	-	
<u>XIV. - Affections produced by External Causes.</u>						
165. Suicide by poisoning	-	3	1	3	-	
166. Corrosive Poisoning (intentional)						
167. Suicide by Gas Poisoning						
168. Suicide by Hanging or Strangulation						
169. Suicide by Drowning						
170. Suicide by Firearms						
171. Suicide by cutting or stabbing Instruments.						
172. Suicide by jumping from a height						
173. Suicide by crushing						
174. Other Suicides						
175. Food Poisoning Botulism						
176. Attacks of poisonous animals - Snake Bite Insect Bite	-	3	-	3	-	
177. Other accidental Poisonings.						
178. Burns (by Fire)						
179. Burns (other than by Fire)	3	22	4	25	2	
Total carried forward	129	1924	76	2053	127	
		21.				

## RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1938.

Diseases	Remaining in hospit- al at end of 1937.	Yearly Total		† Total Cases Treated	‡ Remaining in hospit- al at end of 1938.	Remarks
		Admissions	Deaths			
Brought forward	129	1924	76	2053	127	
<u>XIV.-Affections produced by External Causes (Contd)</u>						
180. Suffocation (accidental)						
181. Poisoning by Gas (accidental)						
182. Drowning (accidental)						
183. Wounds (by Firearms, war excepted)						
184. Wounds (by cutting or stabbing Instruments)	5	125	5	130	10	
185. Wounds (by Fall)	1	8	-	9	4	
186. Wounds (in Mines or Quarries)	-	1	-	1	-	
187. Wounds (by Machinery)	-	3	-	3	-	
188. Wounds (crushing, e.g. railway accidents, &c.)						
189. Injuries inflicted by Animals, Bites, Kicks, &c.	1	9	-	10	-	
190. Wounds inflicted on Active Service						
191. Executions of civilians by belligerents.						
192. A. - Over fatigue B. - Hunger or Thirst						
193. Exposure to Cold, Frost bite, &c.						
194. Exposure to Heat - Heatstroke Sunstroke						
195. Lightning Stroke						
196. Electric Shock	-	2	-	2	-	
197. Murder by Firearms						
198. Murder by cutting or stabbing Instruments.	-	1	1	1	-	
199. Murder by other means						
200. Infanticide (Murder of an infant under one year)						
Total carried forward	136	2073	82	2209	141	



RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1938.

Diseases	Remaining in hospital at end of 1937.	Yearly Total		† Total Cases Treated	‡ Remaining in hospital at end of 1938	Remarks.
		Admissions	Deaths			
Brought forward	136	2073	82	2209	141	
XIV. - <u>Affections produced by External Causes</u> (Contd)						
201. A. - Dislocation	1	2		3		
B. - Sprain	-	8	-	8		
C. - Fracture	7	98	4	105	4	
202. Other external Injuries						
203. Deaths by Violence of unknown cause.	-	17		17		
XV. - <u>Ill-Defined Diseases.</u>						
204. Sudden Death (cause unknown)	-	30	-	30		
205. A. - Diseases not already specified or ill-defined -						
Ascites						
OEdema						
Asthenia	-	1	-	1	-	
Shock						
Hyperpyrexia						
B. - Malingering						
XVI. - <u>Diseases, the total of which have not caused 10 Deaths.</u>						
Total	144	2229	86	2373	145	

Diagrams "A" and "B" representing in graphic form the incidence of infectious and other diseases as based on the figures of cases treated in the Government Hospitals at Mbabane and Hlatikulu, accompany this Report.

TABLE VI.

OUTPATIENTS.

Bremersdorp Hospital,	17,721
Endingeni Outpost,	5,062
Pigg's Peak Outpost,	2,000
Stegi Outpost,	3,705
Mbabane Hospital,	10,162
Hlatikulu Hospital,	2,541
Goedgegun Outpost,	1,582
Mhlotsheni Outpost,	1,500
Sipofaneni Outpost,	984
St. Phillips,	1,069
<u>TOTAL OUTPATIENTS,</u>	<u>46,326</u>

D. DREW

PRINCIPAL MEDICAL OFFICER.

MBABANE,

Swaziland

15th November 1939.

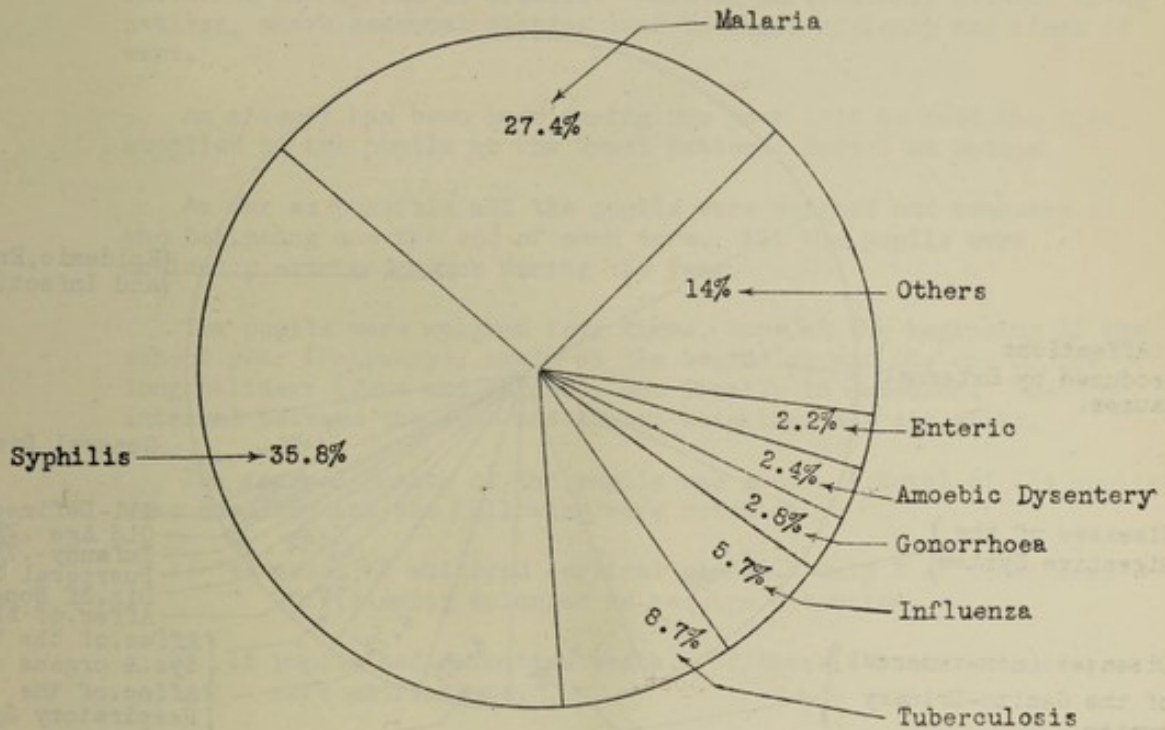


DIAGRAM "A"

EPIDEMIC, ENDEMIC AND INFECTIOUS DISEASES.

CASES TREATED IN GOVERNMENT HOSPITALS.

TOTAL NUMBER 223.



DEATHS 30.

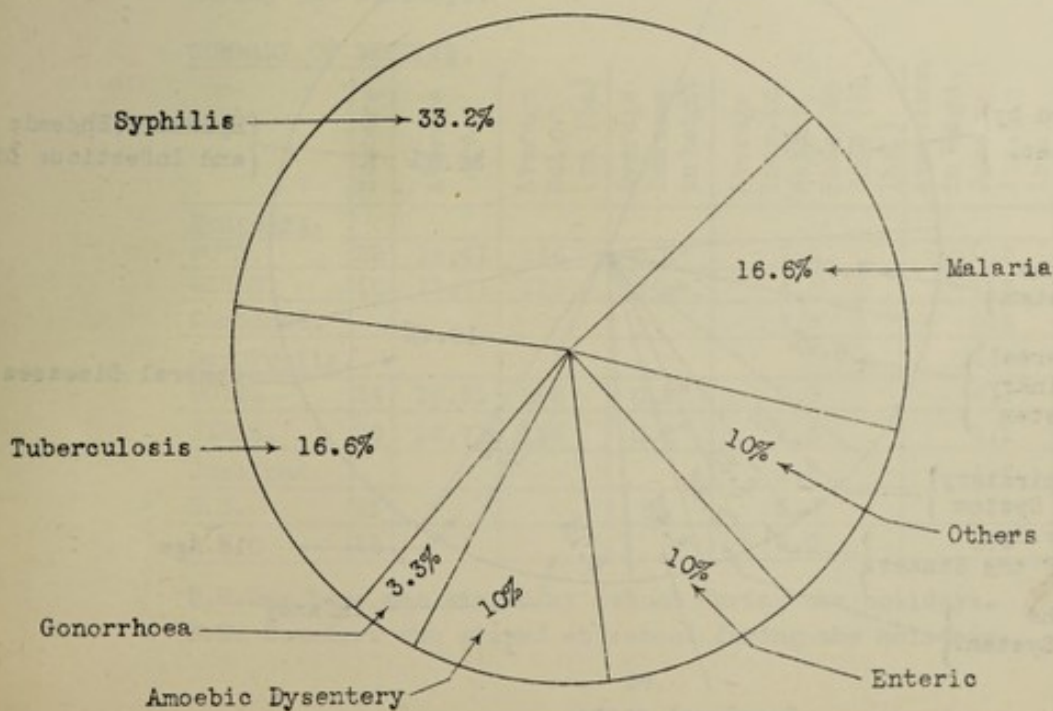


DIAGRAM "B".

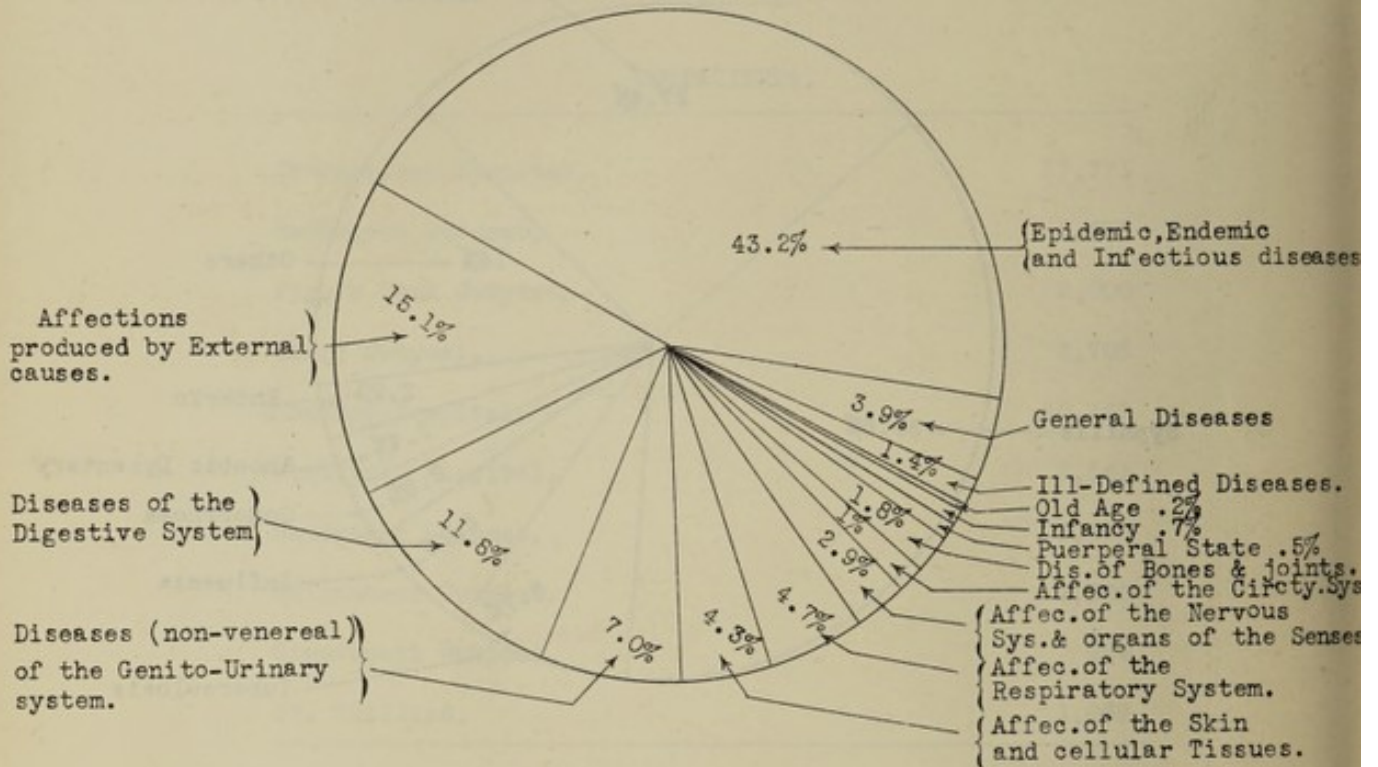
GENERAL SYSTEMATIC AND PREVENTABLE DISEASES

CLASSIFIED AS IN RETURNS EXCLUDING ALL PUERPERAL

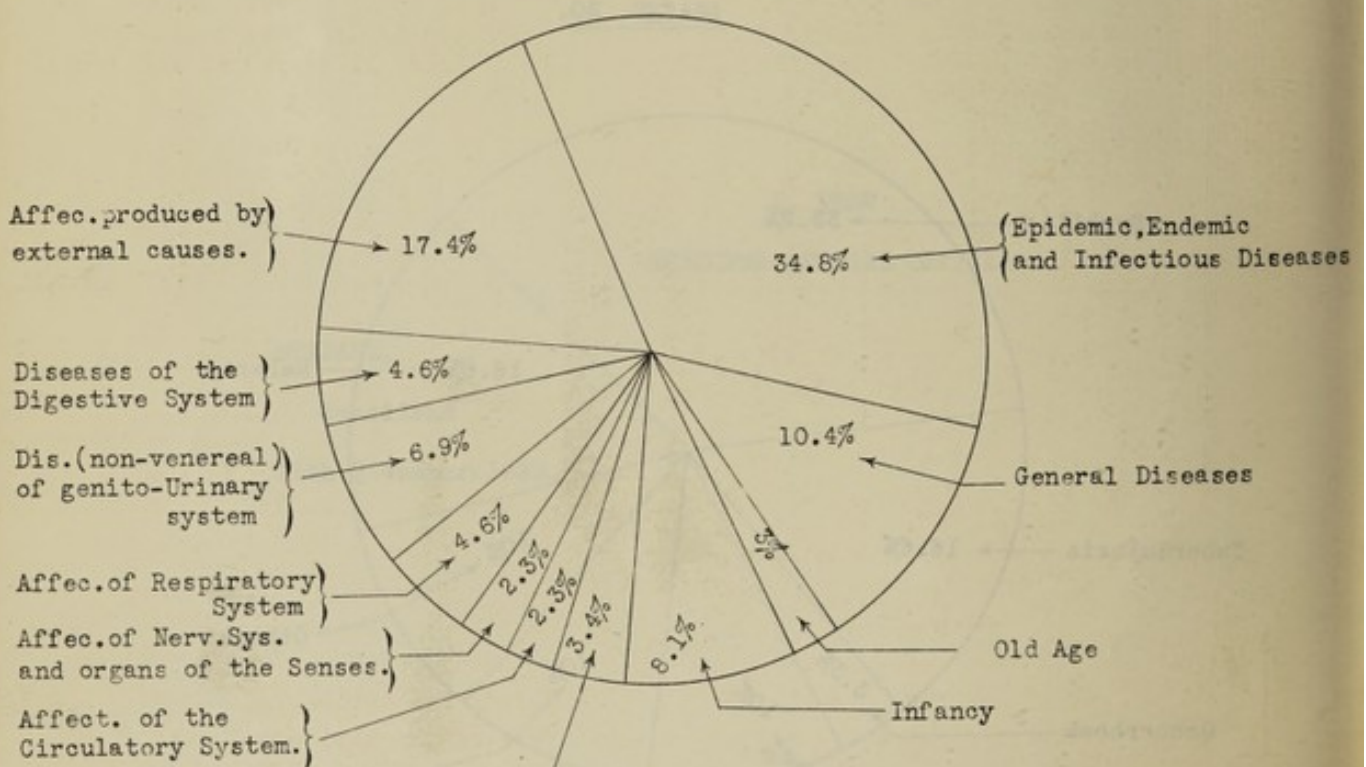
CONDITIONS EXCEPT PUERPERAL SEPSIS & SEQUELAE OF LABOUR.

CASES TREATED IN GOV. HOSPITAL.

TOTAL No. 3329.



DEATHS 86





APPENDIX.

AN INVESTIGATION INTO THE DIET OF THE PUPILS AT THE SWAZI NATIONAL SCHOOL DURING 1938.

It is a well known fact that diet plays an important part in the incidence and spread of disease. This is particularly evident among natives, where seasonal changes lead to times of plenty and times of want.

An attempt has been made during the year 1938 to test the diet supplied to the pupils at the Swazi National School at Matapa.

As far as possible all the pupils were weighed and measured at the beginning and the end of each term. All the pupils were medically examined twice during the year.

The pupils were weighed four times, once at the beginning of the school year (February), again at the beginning and the end of the long holidays (June and August), and finally in December. The interval between the June and August weighings was six weeks.

The general health of the pupils was good. A total of 134 pupils were examined and the following were noted :-

- 1) 44 cases of enlarged cervical glands. Only 3 of these were sufficiently enlarged to require attention.
- 2) 16 pupils had defective teeth. Of these 5 required one or more extractions.
- 3) 15 pupils had enlarged tonsils, but no cases required operation.
- 4) 7 pupils were under weight.
- 5) 2 cases of suspected early pulmonary tuberculosis were noted.

Sufficient data was obtained from 114 cases for statistical purposes. There were 38 boarders (22 boys and 16 girls) and 54 day pupils (34 boys and 20 girls). In addition 11 day boys boarded at the school during the holidays, and a further 11 stayed at the school during the holidays.

SUMMARY OF RESULTS.

	Numbers	Average Age.	Average Weight (in lbs.)	Average Increase in height	Average Incr. in Weight, Febr. to June (in lbs.)	Aver. incr. in Weight, June to Aug. (in lbs.)	Aver. incr. in Weight, Aug. to Decm. (in lbs.)
<u>Boarders.</u>							
BOYS.	22	18.41	134	0.9"	7.5	0.5	2.8
GIRLS.	16	17.71	129	0.6"	8.0	1.5	0.0
Combined.					7.7	0.3	1.6
<u>Day Pupils.</u>							
BOYS.	34	16.51	128	0.8"	0.2	6.8	0.0
GIRLS.	20	16.71	136	0.8"	6.5	1.1	8.7
Combined					2.5	4.7	3.2
D.H.	11				5.0	3.0	2.0
B.H.	11				6.0	0.0	0.0

D.H. Day boys who stayed at school during the holidays.

B.H. Boarders who stayed at school during the holidays.



## ANALYSIS.

The numbers in each group are small, but are sufficient to obtain comparable averages.

The average ages of the boarders are nearly two years greater than those of the day pupils.

The average increase in height is about the same in all groups, with a maximum of 0.9" and a minimum of 0.6".

The average increase in weight varies tremendously in the different groups, and the following facts should be noted. Among the boarders:

- 1) the main increase is from February to June.
- 2) the boys lost weight during the holidays.
- 3) the girls did not increase in weight from August to December

Among the day pupils:

- 1) the boys gained practically no weight during school time.
- 2) the boys gained weight rapidly during the six weeks holiday.
- 3) the day girls gained well during the whole year.

The following is a rough scheme of the diet supplied at the school :-

Breakfast. Every day the same for boys and girls.

Soft porridge (mealie meal) as much as wanted with 1 oz. of sugar for each pupil. Water to drink.

Midday Meal.

Boys. - Monday, Thursday and Saturday.

Stiff porridge as much as wanted, with 1 pint of meat and vegetable soup.

Tuesday, Wednesday, Friday and Sunday.

Stiff porridge as much as wanted, with 1 pint of vegetable soup and half a mug of dry cooked beans.

Girls. Monday and Thursday.

Same as boys.

Saturday.

Same as boys but without meat.

Tuesday, Wednesday, Friday and Sunday..

Same as boys but without beans, which the girls do not like.

Supper.

Boys. Every day the same as breakfast.

Girls. Monday, Wednesday, Thursday, Saturday and Sunday.

Same as boys.

Tuesday and Friday

Same as other days, with in addition tea, 1 oz. of sugar and milk and one slice of bread per pupil.

The bread and tea which the girls enjoy on Tuesday is to replace the meat which the boys get on Saturdays, and the beans which the boys also get on four days a week.



- Mealie Meal. The ration works out at approximately 2 lbs. per day per pupil
- Sugar. 2 oz. per day per pupil.
- Meat. (Including bones).  
About 13 ozs. per pupil on three days a week for the boys,  
and two days for the girls.
- Vegetable Soup. Onions, carrots, beetroot, cabbages, beans, leeks,  
tomatoes etc., from the school garden cooked with meat  
or bones. Curry is added to flavour, and some flour  
to thicken.
- Beans. Mainly tepary or mung beans. Soya beans are used occasionally  
but are not liked. About 4 oz. per boy four times a week.
- Fruit. Supplied irregularly when in season.  
Oranges, pawpaws, grenadillas etc.

#### DISCUSSION.

At first sight it would appear that the diet supplied to the boarders is sufficient.

The average increases for the first term were very satisfactory, but it was rather surprising to find such small increases during the second term. During the six weeks' holiday the boys actually lost weight, while the girls were gaining on the average 1.5 lbs. This may be accounted for by the fact that the boys are expected to do a considerable amount of manual work during the holidays, while the girls have a real holiday.

The fact that the girl boarders did not gain at all during the second term is rather difficult to explain. They had gained considerable more than any other group during the first term, and this might account for a smaller gain during the second term.

The losses in weight were limited to six girls, two of these had been ill during the term and another developed a serious illness soon after leaving school. This partially explains the poor result among the girl boarders.

On the other hand the general gain during the second term compared unfavourably with that of the first term. On referring the matter to the Principal it was found that in 1938 the winter vegetable garden had been badly managed by the native in charge, and that during the second term there was a lack of vegetables in the diet.

This has been remedied, and it will be interesting to note any difference when comparing the results of the two years.

The day pupils give some astounding averages. The average increase for the two terms was about the same (2.5 lbs. and 3.2 lbs.) In fact, the increase was greater for the second term, which was the reverse of the figures obtained for the boarders.

The astounding fact was that the average increase during the six weeks holiday was almost as great as that for the nine months at school. This was still more evident in the averages for the boys. They showed practically no increase in weight during the two school terms, and yet during the six weeks' holidays they gained on the average nearly 7 lbs. The boarders lost weight during the holidays, and yet, under presumably similar circumstances, the day boys managed to gain weight considerably.

The day girls showed satisfactory gains all round, particularly during the second term, which makes the poor results among the girl boarders during this period all the more surprising.

The tremendous difference between the day boys and girls requires explanation. On referring the facts to the Principal it was noted that the day girls brought food with them, in fact without exception the day girls had a satisfactory midday meal, while very few of the day boys had anything to eat at midday.

This meant that the average day for a boy was as follows:-

Breakfast at home - a long walk to school, sometimes as much as four or five miles - a long day at school - further walk home before any more food was available.

The figures showed that the boys had to concentrate their physical



development on the holidays, while the greater part of the year was spent on their mental development. In other words the day boys had alternate phases of mental and physical development, while the boarders developed mentally and physically on parallel lines.

This is obviously unsatisfactory, and was emphasized by the examination results. The Principal informed me that during the year the only failures in J.C. were among the day boys, in fact, he considers it almost impossible to get a day boy through J.C.

This, to my mind, is partially accounted for by the deficient diet. To expect a healthy growing boy to absorb mentally on an empty stomach is asking much.

On the other hand it was pointed out at a school board meeting that natives are used to going for a whole day without food, and the matter was to some extent ridiculed by the native members of the board. What was not realised was that at the school we were dealing with growing boys and not fully grown men, and to expect them to compete with boys having a good midday meal was asking much.

That growing boys can make good use of a mid-day meal was shown by the figures for the boarders.

A copy of the diet supplied at the school was sent to Dr. F.W.Fox of the South African Institute for Medical Research for criticism, and the following extracts from his report are worth noting:

"On looking at the rations one is, of course, immediately struck by the fact that no milk is provided. Provided other good foods are available it is possible, or at least I think so, to construct a diet which is suitable for growing children without milk, but one feels that there should be really good reasons for leaving it out before such a course is resorted to. I find it difficult to believe that at such a school a supply of fresh milk cannot be obtained at a reasonable price and should therefore urge that such an alteration should be carefully considered.

Mealie Meal. It is not stated what type of meal is being used. The tendency is to give in to an undesirable craving for white highly refined meal and I should hope that this would be resisted as far as possible. This is a national school and I think you will agree that the educational value of such matters must not be overlooked. No mention is made of kaffir corn porridge which would provide a useful variant.

With regard to fresh vegetables such as tomatoes, salad, etc., I learnt previously that the children strongly objected, or at least were very lukewarm about them. Some attempt to educate scholars as to the great value of such foods, especially if milk is to be omitted, should surely be made, perhaps beginning with the smaller ones. I also feel strongly that a national school ought to be in the forefront re attitude of respect to the old mfino, which the educated native is so ready to despise. Could they not be collected on the farm gardens and eaten regularly?

Soya beans are quite unpalatable unless treated. The mixed meals available are however a valuable food which could be used to vary the porridge meals with advantage. Similarly pea nuts are not to be despised and should be cheap for you. I should also like to see some place given to the very excellent nuts obtained from the marula. Perhaps there are practical difficulties I do not know about.



I should like to think that when the scholars return home for the holidays, instead of despising and refusing the simple but excellent diet which served the past generation or two, should help to support the best of the past and graft on the new.

Can you find out what the day boys get? Perhaps an issue of some supplementary meal containing what is most lacking might help".

Dr. Fox's report was passed to the Principal for comment, and the following extracts are worth noting:

"I agree with the remarks about milk, the only difficulty is the cost. As a result of this report we are now supplying two gallons of skimmed milk per day for approximately 50 pupils, and we hope to continue this in the future with the possible addition of some whole milk from our own cows.

Fresh vegetables are beginning to be appreciated. It seems that the taste is being acquired, even with lettuce for which there was a strong objection at one time.

I am afraid the suggestion about mfino is impracticable owing to the time and labour involved in picking sufficient to feed our numbers daily or even occasionally. Furthermore the supply is limited and to go far afield in search of such plants is out of the question in an institution of this sort. The same remarks apply to the marula nut, which I believe is known as the Nganu in this country.

The soya bean grows exceptionally well here. We have tried it as a food but with no success. Buying the mixed ration immediately increases costs very appreciably. Our mealie-meal (which is not the highly refined quality) costs us at present 12/6 per bag, and we use about 20 bags per month. The meal containing soya costs a good deal more, (18/6 per bag).

The diet of the day boys varies greatly from family to family. Some have quite good food including vegetables, milk, and sometimes meat. Others (the majority) live almost exclusively on mealie-meal with occasional green mealies or pumpkin and perhaps some beer if they are not church members. The chief difficulty is the fact that so often no food is ready when they leave for school early in the morning. As a result they eat practically nothing the whole day until they get home at 5 or 6 p.m. This may explain why day pupils appear to put on weight during the holidays when they live at home and will presumably take at least two full meals per day.

As my comments have shown, much could be done if expense is to be ignored. I am expected to maintain the hostels with the fees paid by the boarders. The fee is £4.10.0d per pupil per annum. This works out to 9/- per month per person with three meals per day. I cannot see that this allows any margin for experiments in better feeding".

A study of these two reports makes one realise that many of Dr. Fox's recommendations are beyond the realms of practical politics at present, but steps are already being taken to incorporate some of the recommendations. It will be interesting to note any changes during the current year.



Dr. Fox's attitude that a National School should be an example to the whole nation deserves particular notice, and steps should be taken to remove some of the practical difficulties, which at present make it difficult to follow out his recommendations.

The concluding paragraph of the Principal's report, dealing with the financial aspect of the question, is probably the crux of the problem.

#### CONCLUSIONS.

- 1) The diet supplied to the pupils at the Swazi National School is satisfactory, in any case it compares favourably with that obtainable at the home of the average pupil.
- 2) The diet of the day boys is unsatisfactory. The strain of attending school under existing conditions appears to affect their normal development, both physical and mental.

#### RECOMMENDATIONS.

- 1) In view of the unsatisfactory condition of the day boys, the policy of the school should be to discourage the attendance of day pupils.
- 2) Day pupils should not be allowed to attend the school unless arrangements can be made for them to have a midday meal at the school.
- 3) If necessary the fees payable by day pupils should be raised to include a midday meal supplied by the school.
- 4) In view of the fact that this is a National School, it should be an example to the nation, and an institution where modern methods should be tried out. The financial handicaps under which the Principal works should receive attention.
- 5) As an experiment, the authorities should consider giving a small grant to deal with the addition of milk and mixed meal to the diet for one year.

P. KEEN,

Medical Officer.

Mbabane.

August, 1939.



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