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CYPRUS

ANNUAL

MEDICAL & SANITARY REPORT

1935

PRICE FOUR SHILLINGS

NICOSIA:
PRINTED AT THE CYPRUS GOVERNMENT PRINTING OFFICE

1936

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CORRIGENDA

Page 34, para. 8, last line, *delete* “(bladder) vide *infra*.”

Page 36, line 7, for “X-Rays” read “ γ -Rays”.

Page 36, line 13, for “effects” read “effect”.

Page 37, line 16, after “6 cases” add “were”.

Page 37, para. 7, for “Glass” read “Class”.

Page 37, para. 8, 1st line, for “carcinoma” read “carcinomata.”

AGRICULTURE

1. The first step in the process of agriculture is the selection of the land to be cultivated. This is done by the farmer, who chooses a piece of land that is suitable for the crops he wishes to grow. The land should be fertile, well-drained, and free from any obstacles that might hinder the growth of the crops.

2. The second step is the preparation of the land. This involves plowing the land to break up the soil and remove any weeds or stones. The plow is a simple machine that is pulled by oxen or other animals. It has a long wooden handle and a metal blade that turns over the soil.

3. The third step is the sowing of the seeds. The farmer takes a handful of seeds and scatters them over the plowed land. The seeds will fall into the furrows made by the plow. The farmer then uses a simple machine called a seed drill to cover the seeds with soil. This helps to protect the seeds from birds and other animals that might eat them.

4. The fourth step is the watering of the crops. The farmer uses a simple machine called a water wheel to pump water from a nearby stream or river into a large tank. From the tank, the water is piped to the crops. The farmer then uses a simple machine called a water pump to spray the water onto the crops. This helps to keep the crops moist and healthy.

5. The fifth step is the harvesting of the crops. The farmer uses a simple machine called a sickle to cut the crops. The sickle has a long wooden handle and a curved metal blade. The farmer swings the sickle over the crops, and the blade cuts them. The farmer then bundles the crops together and carries them to a nearby field or barn.



CYPRUS

ANNUAL

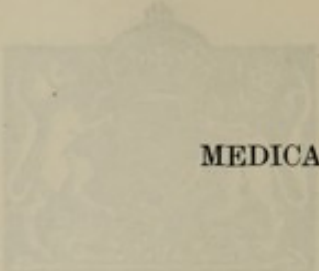
MEDICAL & SANITARY REPORT

1935

NICOSIA:

PRINTED AT THE CYPRUS GOVERNMENT PRINTING OFFICE

1936



MEDICAL DEPARTMENT,
NICOSIA, CYPRUS,
30th May, 1936.

Sir,

I have the honour to submit for the information of His Excellency the Governor, and for transmission to the Right Honourable the Secretary of State, the Medical Report on the Health and Sanitary Conditions of Cyprus, for the year 1935, together with the returns, etc., appended thereto.

I have the honour to be,

Sir,

Your obedient Servant,

E. A. NEFF,
Director of Medical Services.

*The Honourable
The Colonial Secretary,
Cyprus.*

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ANNUAL MEDICAL & SANITARY REPORT FOR THE YEAR, 1935.

I. ADMINISTRATION.

(A) ESTABLISHMENT (INCLUDING VACANCIES), ACTING APPOINTMENTS AND PROMOTIONS.

The establishment of the Medical Department, Cyprus, consisted, during 1935, of :

MEDICAL STAFF.

- 1 Senior Medical Officer.
- 1 Surgical Specialist.
- 1 Government Bacteriologist.
- 1 Government Analyst.
- 1 Medical Superintendent, Mental Hospital.
- 3 Honorary Ophthalmic Surgeons.
- 5 Honorary Dentists.
- 3 Travelling Ophthalmic Surgeons.
- 3 District Medical Officers.
- 3 Medical Officers, 1st Grade.
- 20 Medical Officers, 2nd Grade.
- 1 School Medical Officer.
- 14 District Surgeons.

ENGLISH NURSING STAFF.

- 4 Matrons.
- 7 Nursing Sisters.

OTHER MEDICAL AND SANITARY STAFF.

- 1 Chief Sanitary Inspector.
- 6 District Sanitary Inspectors.
- 7 Sanitary Inspectors, 1st Grade.
- 17 Sanitary Inspectors, 2nd Grade.
- 28 Compounders.
- 1 Medical Storekeeper.
- 1 Assistant Medical Storekeeper.
- 1 Housekeeper, Nicosia General Hospital.
- 7 Staff Nurses.
- 8 Male Orderlies.
- 13 Probationer Nurses.
- 1 Head Warder, Mental Hospital.
- 14 Mental Hospital Attendants.
- 3 Guards (Leper Farm).
- 1 Assistant to Analyst.
- 1 Bacteriological Assistant.
- 2 Government Midwives.

CLERICAL STAFF.

- 2 Clerks, 2nd Grade.
- 1 Clerk, 3rd Grade.
- 3 Clerks, 4th Grade.
- 2 Student Clerks.

There are, in addition to the above, Cooks, Servants, Kitchen-boys, House-maids, Ward-maids, Charwomen, Sanitary Labourers, Attendants, Messengers, etc., etc.

Note.—For names of the principal appointments, see Appendix L.

PRINCIPAL ACTING APPOINTMENTS.

Name	Acting Appointment	From	To
Dr. S. G. Willimot	Agricultural Chemist ..	1. 6.35—28. 8.35	
Mr. L. Haralambides, Asst. to Analyst	Analyst	29. 8.35—31.12.35	
Mr. E. Christofides, District Sanitary Inspector ..	Chief Sanitary Inspector	9. 6.35—16. 6.35	
Dr. P. Koumas, Medical Officer, 2nd Grade.. ..	District Medical Officer, Famagusta	1. 1.35—23.10.35	
Dr. J. Christodoulides, Medical Officer, 2nd Grade.. ..	District Medical Officer, Limassol	24. 8.35— 4.12.35	
Miss H. M. Morsley, Nursing Sister	Matron, Nicosia General Hospital	15. 6.35—30.11.35	
Miss D. M. Drew, Nursing Sister	Matron, Nicosia General Hospital	1.12.35—19.12.35	

NEW APPOINTMENTS.

Name	Appointment	Date
Dr. W. J. E. Phillips ..	District Medical Officer ..	8th Feb., 1935
Dr. E. Dikheos	Honorary Radiologist ..	27th Mar., 1935
Dr. T. Evangelides ..	Honorary Physician, Sanatorium	21st Jan., 1935
Dr. P. Haji Eftychiou ..	District Surgeon	1st Jan., 1935
Miss S. M. Georghiadou ..	Honorary Dentist	1st May, 1935
Dr. Hamdi Rassim	Honorary Radiologist ..	1st Oct., 1935
Dr. N. Savvides	Honorary Dentist	1st May, 1935
Dr. O. N. Ellinopoulos ..	District Surgeon	1st Jan., 1935
Miss F. M. E. Pepper ..	Matron	6th Dec., 1935
Miss M. C. CJSB Atkin ..	Nursing Sister	15th Mar., 1935
Miss E. Bishopp	do.	14th June, 1935
Miss J. Rudge	do.	28th June, 1935

PROMOTIONS.

Nil.

RETIREMENTS, RESIGNATIONS AND TRANSFERS.

Name	Post	Date
Dr. Z. K. Zardis	Medical Officer, 2nd Grade	6th Nov., 1935
Miss A. Moxon	Matron	6th Oct., 1935
Miss M. M. Murphy.. ..	Nursing Sister	30th June, 1935
Miss W. Hunton	do.	6th July, 1935
Miss M. D. Williams ..	do.	1st Dec., 1935

DEATHS.

Nil.

(B) LIST OF LAWS, ORDERS, REGULATIONS, ETC., AFFECTING PUBLIC HEALTH ENACTED DURING THE YEAR.

The following Laws, Regulations and Orders were passed during the year :—

LAWS.

No. 12 of 1935.—A Law to consolidate and amend the Law relating to the Licensing of Hotels.

REGULATIONS, ORDERS, ETC.

No. of Notice in Gazette	Subject
1171 ..	International Sanitary Convention for Aerial Navigation.
657 ..	Kakopetria declared a summer resort under the Public Health Laws, 1928 and 1934.
747 ..	Bye-laws Public Health Board, Kantara, under Public Health (Summer Resorts) Laws, 1928 and 1934.
1178 ..	Hotel Regulations under Hotels Law, 1935.
1229 ..	The Quarantine (Public Health) Regulations, 1935.

New Burial Grounds were ordered for the following villages :—

<i>No. of Notice in Gazette</i>	<i>Subject</i>	<i>No. of Notice in Gazette</i>	<i>Subject</i>
9	.. Astromeritis	804	.. Nicosia
175	.. Limassol	805	.. Ayios Theodoros (L'ca.)
286	.. Varosha	806	.. Lapathos
371	.. Spilia	839	.. Odhou
417	.. Pano Lakatamia	937	.. Polystipos
418	.. Pharmakas	1139	.. Kato Dheftera
485	.. Pano Pyrgos	1176	.. Kato Moni
570	.. Ambelikou	1399	.. Engomi
616	.. Kritou Marottou	1463	.. Livadhia (Famagusta)
802	.. Nicosia	1464	.. Kato Lakatamia
803	.. Nicosia	1558	.. Kato Lakatamia

Bye-laws, touching health matters, were made under the Municipal Corporations Law by the following Municipalities :—

<i>No. of Notice in Gazette</i>	<i>Municipality</i>	<i>No. of Notice in Gazette</i>	<i>Municipality</i>
293	.. Pedhoulas	747	.. Kantara
327	.. Larnaca	910	.. Kakopetria

The Public Health (Villages) Law was applied to the following villages :—

<i>No. of Notice in Gazette</i>	<i>Village</i>	<i>No. of Notice in Gazette</i>	<i>Village</i>
66	.. Karamoullidhes	921	.. Polystipos
67	.. Khrysokhou	998	.. Asomatos
247	.. Ardhana	1203	.. Galatia
351	.. Athienou	1230	.. Gypsos
479	.. Beuyuk Kaimakli	1232	.. Paralimni
568	.. Pendakomo	1278	.. Lythrodhonda
569	.. Monagroulli	1319	.. Peristerona
615	.. Yermasoyia	1379	.. Kilinia
636	.. Ayios Epiktitos	1426	.. Argaki
840	.. Evdhimou	1491	.. Kato Dhrys
914	.. Pano Kividhes	1515	.. Plataniskia

(c) FINANCIAL.

The total expenditure of the Medical Department was :—

	1932	1933	1934	1935
Personal Emoluments..	£24,642 14 6 ..	£22,793 13 6 ..	£22,097 0 1 ..	£22,950 0 2
Other Charges ..	£28,766 10 1 ..	£26,105 0 8 ..	£27,557 4 0 ..	£29,478 9 2
Total ..	£53,409 4 7 ..	£48,898 14 5 ..	£49,654 4 1 ..	£52,436 9 4

As compared with the total expenditure of the Island during 1935, £828,771. 15s. 5cp., this equals 6.33%.

The total revenue of the Medical and Sanitary Department, as shown below, amounted to £2,872. 9s. 4cp.

REVENUE.

	£	s.	cp.
1. Sale of Medicines	345	12	4
2. Hospital Receipts	1,243	10	1
3. Other	120	4	6
4. Analytical and Bacteriological fees	124	18	3
5. Registration of Diplomas	111	0	0
6. Quarantine Dues and Health Certificates	927	3	8
Total	£2,872	9	4

(D) MEDICAL STORES.

This important Department has been entirely reorganized. A new Storekeeper has been appointed and the staff augmented and changed to meet and deal with the rather difficult and varied work presenting.

Working of Headquarters Medical Stores during the Year 1935.

	£	s.	cp.
Value of stock on 1st January, 1935	2,680	19	1
Bought during 1935	5,294	14	2
	7,975	13	3
Value of stock on 31st December, 1935	2,841	11	1
Value of stock issued equals	£5,134	2	2

(E) REORGANIZATION.

A scheme of reorganization of the entire department was prepared and submitted to Government late in the year. The scheme was prepared in such a way that the Government is not involved in extra expense thereby, but the principles outlined can be elaborated somewhat as funds become available. Such reorganization I feel has been indicated for many years. Full details will be published in the next annual report, providing the scheme is approved.

II. PUBLIC HEALTH.

(A) GENERAL REMARKS.

The Public Health problem of outstanding importance in Cyprus is Malaria and, realizing this early in 1935, an attempt was made to interest the International Health Division of the Rockefeller Foundation in survey and later control work. To this end, complete data of the problem, together with maps and photographs, were sent to Dr. F. F. Russel, Director of the Rockefeller Foundation in New York, and, as a result, Dr. M. A. Barber was sent to Cyprus during June of 1935. An intensive survey was conducted during the height of the malaria season, i.e. from 22nd June to 2nd August and the interesting paper which eventuated is included as an Appendix to this Report. (Please see Appendix D.) As foreshadowed, the situation as shown by blood parasite, sporozoite and spleen rates, is even worse than we had thought which position continued as demonstrated by work, carried out on lines indicated by Dr. Barber, subsequent to his departure in August. Following Dr. Barber's review of the situation in report form, Dr. G. K. Strode, representative of the Rockefeller Foundation in Europe, arrived on 8th December and, during the week he remained in Cyprus, a comprehensive tour of the Island was made. As a result of Dr. Barber's Report and Dr. Strode's visit I have reason to believe that the Foundation will send Staff members to Cyprus early in 1936 for prolonged co-operation in the epidemiology and control of malaria here. It will be apparent what a tremendous advance this will mean in an island where so little work of a permanent nature has heretofore been possible.

With the exception of malaria and typhoid fevers, general health conditions in the Island were satisfactory. Malaria not being a notifiable disease it is not possible to measure accurately the actual extent of its incidence throughout the Island. Records kept by the Government Medical Officers and Institutions show that 17,917 cases of this disease were seen during the year as compared with 11,665 cases reported in 1934, due in part to the heavier rainfall experienced.

Patients seen at hospitals and rural dispensaries during the year numbered 185,336 made up of 110,006 out-patients, 6,166 in-patients, 43,601 children examined for spleen enlargement, 2,668 new cases at the Venereal Diseases Clinics, 231 at the Mental Hospital and 22,664 examined by the Honorary Dentists.

It was found on investigation that the system of Mukhtars' certificates of pauperism, which has been in force for many years and entitles holders of such certificates to free in-patient and out-patient treatment, was being grossly abused. On reporting to Government that during 1934 out of a population of 361,653, 130,546 presented themselves at the various hospitals and of these 117,440 presented Mukhtars' certificates and were treated free, a committee consisting of myself and Mr. B. J. Surridge, B.A., Commissioner of Larnaca, was appointed to investigate and report.

Our report is included as Appendix H. It has Government's approval and will come into force at all medical centres on 1st January, 1936. It is estimated that from £1,500 to £2,000 extra departmental revenue will result thereby.

(B) DISEASES.

Communicable diseases are dealt with under Section III.

Cancer.—187 out-patients and 136 in-patients are recorded against 137 and 152 of the previous year. (For full details see Appendix A.)

Rheumatism.—The number of cases, among out-patients, has increased from 1,228 in 1934 to 1,301 in 1935, while among in-patients it has decreased from 82 to 69.

Eye Diseases.—Over 17,000 cases have been seen during the year. The principal condition, for which patients seek treatment, is trachoma and its sequelæ. The work of the Honorary and Travelling Oculists was closely estimated and appraised early in the year and it was, after investigation, only too evident that while they individually were doing good work, such was the mass of work presenting that the numerous centres could only be visited at weekly or fortnightly intervals and Trachomatous cases between visits were not, for the most part, receiving the continued treatment so necessary to them if progress is to be made. Provision has been made in the 1936 estimates for the training and employment of 15 Cypriot nurses for this important work. These girls after training will be stationed at Trachoma centres and will be responsible for the routine daily treatment of patients as outlined by the Oculists. Three such nurses have been doing duty in the Larnaca District for some time and I have been greatly impressed, on my visits there, by the splendid work they are doing and the progress being made as shown by the decrease of Trachoma incidence in the locality served by them. Propaganda in the form of lectures and cinema demonstrations continues.

Wounds.—A considerable increase of cases of cutting and stabbing instruments was observed during the year. 2,672 cases were treated: of these 66% are males.

Venereal Diseases.—2,668 new cases attended for treatment during the year as against 3,378 during 1934. The decrease in incidence is, I am convinced, partially due to the establishment of Prophylactic Stations in each of the five principal towns. Heretofore, with the exception of Larnaca, Municipalities had Prophylactic centres run by private individuals where treatment could be obtained on payment of a fee. Under the new arrangement Government supplies to Municipal centres drugs and dressings and the Municipality the attendants, premises, lighting and equipment. All treatment is free. With a simultaneous educational programme at these centres attendances have multiplied tremendously and incidence of venereal diseases has appreciably fallen.

Dr. M. Gosden, the Government Bacteriologist, was asked to make surprise visits to all Venereal Diseases Clinics during the year and report as to their efficiency and to make recommendations for improvement there. This work was duly carried out. A very complete report resulted and it is hoped to carry into effect most of the recommendations embodied in the Report during 1936 and 1937.

I publish at Appendix F, Dr. N. Michaelides' Report on the Venereal Diseases Clinics.

GENERAL SYSTEMIC AND COMMUNICABLE DISEASES TREATED IN GOVERNMENT INSTITUTIONS.

TOTAL CASES (a) & (b) 116,387.

1935.

(a)—General Systemic Diseases

Digestive System 30.5 per cent.

Eye 23.7 per cent.

Skin Diseases 13.0 per cent.

Nervous System 11.2 per cent.

General and Other Diseases 10.5 per cent.

Respiratory System 9.5 per cent.

Organs of Locomotion 1.6 per cent.

(b)—Communicable Diseases

Influenza 16.9 per cent.

Other Diseases 9.3 per cent.

Gonorrhoea 5.5 per cent.

Syphilis 1.7 per cent.

Tuberculosis 1.0 per cent.

Malaria 65.6 per cent.

(c) VITAL STATISTICS FOR 1935.

<i>District</i>	<i>Estimated Population at 30.6.35</i>		<i>Birth Rate per 1,000</i>		<i>Death Rate per 1,000</i>		<i>Infantile Mortality Figure</i>
Nicosia	..	116,787	..	32.7	..	14.4	.. 116.4
Larnaca	..	45,249	..	27.4	..	10.8	.. 90.6
Limassol	..	59,304	..	31.8	..	14.6	.. 136.7
Famagusta	..	74,693	..	32.8	..	12.2	.. 115.2
Paphos	..	44,370	..	33.6	..	14.5	.. 136.5
Kyrenia	..	23,094	..	32.6	..	15.7	.. 140.7
Total	..	363,497	..	32.3	..	13.6	.. 120.9

FOR SIX PRINCIPAL TOWNS.

Nicosia	..	25,803	..	27.7	..	15.0	.. 78.1
Larnaca	..	12,750	..	21.6	..	11.6	.. 86.9
Limassol	..	16,202	..	26.7	..	14.2	.. 89.8
Famagusta	..	11,231	..	20.4	..	10.2	.. 134.7
Paphos	..	4,684	..	16.8	..	12.1	.. 50.6
Kyrenia	..	2,233	..	48.3	..	21.4	.. 111.1
Total	..	72,903	..	25.2	..	13.4	.. 88.9

TABLE SHOWING THE SICK, INVALIDING AND DEATH RATE OF EUROPEAN OFFICERS.

	1932	1933	1934	1935
Total number of officials resident	100	.. 101	.. 102	.. 96
Average number resident	.. 87.6	.. 89.7	.. 86.6	.. 86.3
Total number on sick list	.. 42	.. 33	.. 30	.. 33
Total number of days on sick list	.. 393	.. 425	.. 219	.. 227
Average daily number on sick list	.. 1.0	.. 1.1	.. 0.6	.. 0.6
Percentage of sick to average number resident	.. 42.0	.. 36.6	.. 29.4	.. 33.3
Average number of days on sick list for each patient	.. 9.3	.. 12.8	.. 7.3	.. 6.7
Average sick time to each resident	.. 3.9	.. 4.7	.. 2.0	.. 2.6
Total number invalided	.. —	.. 1	.. —	.. —
Percentage of invaliding to total residents	.. —	.. 0.9	.. —	.. —
Total deaths	.. —	.. —	.. 2	.. 1
Percentage of deaths to total residents	.. —	.. —	.. 1.9	.. 1.0
Percentage of deaths to total average number resident	.. —	.. —	.. 2.3	.. 1.1
Number of cases of sickness contracted away from residence	.. —	.. —	.. —	.. —

TABLE SHOWING THE SICK, INVALIDING AND DEATH RATE OF
CYPRIOT OFFICIALS.

	1932	1933	1934	1935
Total number of officials resident	2,821	1,959	2,025	1,847
Average number resident ..	2,815	1,953	2,016	1,842
Total number on sick list ..	1,449	1,687	1,671	1,154
Total number of days on sick list	7,078	6,592	7,121	6,814
Average daily number on sick list	19.3	18.0	19.5	18.6
Percentage of sick to average number resident	51.3	86.1	82.8	62.6
Average number of days on sick list for each patient	4.8	3.9	4.2	5.9
Average sick time to each resident	2.5	3.3	3.5	3.6
Total number invalided ..	22	4	21	23
Percentage of invalidings to total resident	0.8	0.2	1.0	1.2
Total deaths	16	5	5	4
Percentage of deaths to total resident	0.5	0.2	0.2	0.2
Percentage of deaths to total average number resident ..	0.6	0.2	0.2	0.2
Number of cases of sickness contracted away from residence	—	—	—	—

III. HYGIENE AND SANITATION.

(A) GENERAL REVIEW OF WORK DONE AND PROGRESS MADE.

(1) ADMINISTRATION.

(a) *General*.—The co-operation between this Department and the Municipal Authorities in respect of sanitary matters continued with satisfactory results. These Municipalities submit an Annual Report on their health activities and I include that of Nicosia in Appendix K.

I am glad to be able to state that the Municipal Corporation of Limassol and Nicosia have now decided to employ whole-time Medical and Sanitary Officers and it is hoped that other Municipalities will follow their example in the near future.

Close co-operation has been maintained with the Educational Authorities in connection with health education of teachers and school hygiene in general.

(b) *Personnel*.—The table subjoined gives the permanent staff employed on Hygiene and Sanitation.

	Chief Sanitary Inspectors	District Sanitary Inspectors	Sanitary Inspectors, 1st Grade	Sanitary Inspectors, 2nd Grade	Quarantine Sanitary Inspectors	Government Midwives
Nicosia	—	1	4	4	—	2
Larnaca	—	1	—	3	1	—
Limassol	—	1	—	5	1	—
Famagusta	—	1	1	3	1	—
Paphos	—	1	1	2	—	—
Kyrenia	—	1	1	—	—	—
Colony	1	—	—	—	—	—
Total	1	6	7	17	3	2

Besides the above staff, large numbers of temporary sanitary labourers are employed during the malaria season in dealing with rivers, wells and other collections of water.

Dr. Costas S. Markides, who has been studying at the Rockefeller Assisted School at Athens for his Diploma in Public Health obtained that degree and returned to the Island during November, 1935. He will be posted as a full-time Health Officer for the Districts of Nicosia and Kyrenia as from 1st January, 1936.

Dr. Polycarpus E. Demetriades, a 2nd Grade Medical Officer, was selected for similar training and proceeded to Athens during November, 1935, and Dr. Michael Theodoulou at his own expense proceeded to London during September to take up studies leading to the Diploma of Tropical Medicine and Hygiene. If these officers obtain their degrees Government will be asked to approve their appointment as full-time Health Officers and one will be stationed for duty in the Limassol-Paphos and the other in the Famagusta-Larnaca Districts.

Miss Melahat A. Houlousi, Sanitary Inspector, 1st Grade, has during the past two years been employed whole-time in the Department as a technician in malaria control work and has through her keenness, ability and continuous work come to be an invaluable officer. Needless to say she acquired much additional knowledge, while working with Dr. M. A. Barber of the Rockefeller Foundation. After his departure Miss Melahat proceeded on study leave for two months to Dr. Barber's laboratory at Kavalla, Greece, where she was made thoroughly familiar with the technique of Dr. Barber's modification of the Uhlenhuth Weidanz blood Precipitin reaction.

(II) COMMUNICABLE DISEASES.

(a) *Insect-borne Diseases.*

Malaria.—The incidence of malaria during the year was high. This disease not being notifiable it is not possible to give an accurate statement but from records kept by Government Medical Officers and Institutions, the number of cases reported was found to be 17,917 as compared with 11,665 in 1934. The percentage of malaria cases was 15.3% of the combined out-patients and in-patients during 1935. The spleen rates are given in the subjoined tables.

With the co-operation of the Cyprus-Palestine Plantation Company, it has been possible to carry out certain anti-mosquito measures at the Akrotiri marshes. The area is intensely malarious and affects the health of the nearby villages as well as the employees of the above-mentioned Company. The mosquito control work undertaken there, though more of an experimental nature, was comparatively satisfactory and it is hoped that better results will follow when the area is surveyed and reported on by the sanitary experts of the Rockefeller Foundation.

SPLEEN RATE RETURN FOR THE SIX TOWNS, 1935.

<i>Town</i>	<i>Total examined</i>	<i>Enlarged Spleen</i>	<i>Spleen Rate</i>
Nicosia	3,012	33	1.0
Larnaca and Scala..	1,537	12	0.7
Limassol	2,339	87	3.7
F'gusta and Varosha	1,139	—	—
Ktima and Paphos	611	21	3.4
Kyrenia	344	8	2.3
Total	8,982	161	1.8

SPLEEN RATE RETURN (OCTOBER, NOVEMBER AND DECEMBER) FOR THE SIX DISTRICTS, 1935.

<i>District</i>	<i>Total examined</i>	<i>Enlarged Spleen</i>	<i>Spleen Rate</i>
Nicosia	13,994	1,260	9.0
Larnaca	5,343	281	5.2
Limassol	6,756	1,192	16.1
Famagusta	9,237	539	5.8
Paphos	5,210	1,045	20.0
Kyrenia	3,061	470	15.3
Total	43,601	4,787	10.9

GAS OIL, PARIS GREEN, QUININE ISSUED AND USED DURING THE YEAR 1935.

Year 1935	Nicosia	Larnaca	Limassol	Famagusta	Paphos	Kyrenia	Total	Amount of Quinine in kilos
	kilos	kilos	kilos	kilos	kilos	kilos	kilos	
Gas Oil ..	14732.	5080	21336.609	121.920	11176.812	71.120	71629.421	
Paris Green	575.909	116.182	83.502	36287.	225.170	—	1037.050	
Quinine Sulph. ..	42.5	25	43.3	36	30.25	11	188.05	
Tab. Quinine Sulph. Grs. II ..	No.	No.	No.	No.	No.	No.	No.	
Tab. Quinine Sulph. Grs. III ..	19,000	3,500	2,000	4,000	2,000	1,000	31,500	4.082 approx-imately.
Tab. Quinine Sulph. Grs. V ..	76,000	5,500	31,000	15,000	3,000	1,500	132,000	
Tab. Quinine Sulph. Grs. V ..	84,000	15,000	49,000	28,000	8,000	4,000	188,000	60.912 approx-imately.

DETAILED FIGURES OF PRINCIPAL ANTI-MALARIAL WORKS CARRIED OUT.

	Nicosia	Larnaca	Limassol	Famagusta	Paphos	Kyrenia
River beds, drains, streams, dealt with and new drains made, in miles	408	281	314	52	787	137
Wells covered, filled, oiled and stocked with fish ..	17,591	9,249	5,546	23,950	6,471	4,744
Tanks stocked with fish ..	350	29	91	171	42	55
Premises inspected	210,536	138,619	353,456	221,564	121,390	80,505
Number of visits to villages by Sanitary Staff	3,311	1,588	1,769	3,153	4,631	780
Paris Green used, in lb. ..	913	187	155	89	453	55
Gas Oil used, in tons ..	14	5	16	14	14	9

(b) Communicable Diseases other than at (a) and (c).

Smallpox and Vaccination.—No case of smallpox occurred during 1935.

The table below shows the number of vaccinations performed during the year under review.

Number of vaccinations	8,117
Primary vaccinations	7,096
Successful	5,115
Unsuccessful	772
Not accounted for	1,209
Re-vaccinations	1,021
Successful	398
Unsuccessful	512
Not accounted for	111

Plague.—Anti-rat measures are being carried out at the principal ports where 2,351 rats were trapped by the sanitary staff, and spleen smears were examined by the Government Bacteriologist. All such smears were negative.

The ports of Larnaca, Famagusta and Limassol are now equipped to carry out deratisation of ships up to 220 tons, and to issue deratisation certificates.

For report on the Species of Fleas, etc., see Appendix B.

Pulmonary Tuberculosis.—There were 223 cases of this disease reported during the year as compared with 233 reported last year. As might be expected, the cases reported do not represent the total number in the Island. It is, however pleasing to report that, there is a growing desire on the part of sufferers to be admitted to the Sanatorium. Unfortunately there are not sufficient beds available for all cases, and there is always a formidable waiting list.

Two important developments in Tuberculosis control in Cyprus occurred during the year. The first was the institution of a fund for the purpose of building a modern Sanatorium, for early cases, on the slopes of Troödos. This fund which was associated with the Silver Jubilee of His Late Majesty, King

George V, was generously subscribed to, and there is now on hand or promised a sum of over £7,000 for the purpose. Plans are being prepared and it is hoped that before the end of 1936 construction will have commenced.

This therapeutic institution is to accommodate, in the first instance 57 cases, is to be placed on a beautiful site amongst the pine tree at the 4,000 feet level where the incidence of malaria is negligible and redress is to be found from the sweltering heat of the plains. The buildings will be adjoining improved roads from Nicosia and Limassol so that patients may be brought from all parts of the Island in all weather conditions. Furthermore, abundant proof exists for the success of the treatment of the earlier cases in this vicinity.

The second important step in this direction has been the formation of an Anti-Tuberculosis League, which has been affiliated with the National Association for the prevention of Tuberculosis. The National Association for the prevention of Tuberculosis has already extended much valuable assistance to the local league and have very kindly promised financial and expert assistance in the way of a Medical Officer and a nurse commissioner, who will assist us in putting the work here somewhat on a par with the programme carried out by the National Association in England. Funds collected for this purpose to December, 1935, amounted to £310.

The Anti-Tuberculosis League, has been active since its inception in organizing dances, sale of Christmas Seals, etc., and is carrying on propaganda work by the issue of posters, leaflets, giving lectures, and in publishing a monthly bulletin in the three principal languages, which is being distributed free to all elementary schools, clubs, coffee-houses, teachers, village authorities, etc. Another effort of the Anti-Tuberculosis League has been in establishing chest clinics. Nicosia and Larnaca have already been provided with such clinics and are doing excellent work. Their number will be increased as the funds of the League permit.

The League has as its patrons His Excellency the Governor, Sir Herbert Richmond Palmer, K.C.M.G., C.B.E., M.A., LL.B., the Honourable W. D. Battershill, Colonial Secretary, the Director of Medical Services as President, Mrs. E. Passingham, Honorary Secretary, and is further made up of many prominent Cypriot and enthusiastic workers.

The following tables give details collected from notification cards but such is the fear of the disease that the numbers given by no means give a true picture of island incidence.

PULMONARY TUBERCULOSIS.

By Sex and Age Groups.

<i>Male</i>	0-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	NR.	Total	Grand Total
Nicosia	—	—	—	2	5	13	4	1	2	—	—	1	28	—
Larnaca	—	—	—	3	2	7	2	2	3	1	—	—	20	—
Limassol	1	—	1	1	2	8	5	1	—	—	—	—	19	—
Famagusta	—	—	1	3	6	4	2	2	1	—	—	—	19	—
Paphos	1	—	—	4	2	2	1	1	—	1	—	—	12	—
Kyrenia	—	—	—	1	1	3	3	1	—	—	—	—	9	—
Total	2	—	2	14	18	37	17	8	6	2	—	1	107	—
<i>Female</i>														
Nicosia	—	—	1	8	10	9	2	1	1	—	—	—	32	60
Larnaca	—	1	1	2	4	4	5	2	2	—	—	—	21	41
Limassol	—	—	1	4	4	5	1	1	—	—	—	—	16	35
Famagusta	—	—	3	3	4	1	4	1	—	—	—	—	16	35
Paphos	—	2	3	1	2	5	3	4	—	2	—	—	22	34
Kyrenia	—	—	—	1	3	2	1	1	1	—	—	—	9	18
Total	—	3	9	19	27	26	16	10	4	2	—	—	116	223
Grand total	2	3	11	33	45	63	33	18	10	4	—	1	223	—

Cases by Race.

<i>British</i>	<i>Greek</i>	<i>Turk</i>	<i>Other</i>	<i>Total</i>
— ..	173 ..	46 ..	4 ..	223

Cases per 10,000 of Population per District.

Nicosia ..	..	..	..	..	..	5.1
Larnaca ..	..	..	..	..	..	9.1
Limassol ..	..	..	..	..	..	5.9
Famagusta ..	..	..	..	..	..	4.6
Paphos ..	..	..	..	..	..	7.6
Kyrenia ..	..	..	..	..	..	7.7
Whole Colony	..	..	..	..	..	6.1

DYSENTERY.

The total number of dysentery cases notified during the year 1935 were 133 as compared with 377 in 1934. Since 1930 this disease shows a steady decrease.

The following tables give details collected from the notification cards.

By Sex and Age Groups.

<i>Male</i>	0-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	NR.	Total	Grand Total
Nicosia	2	1	2	1	4	—	2	6	—	1	—	—	19	
Larnaca	1	1	—	1	—	1	—	3	—	1	—	—	8	
Limassol	3	1	1	—	4	—	1	3	1	—	—	—	14	
Famagusta	8	—	1	3	3	2	2	1	4	—	—	—	24	
Paphos	—	—	—	1	—	—	2	2	1	—	—	—	6	
Kyrenia	—	1	—	—	—	1	—	—	—	—	—	—	2	
Total	14	4	4	6	11	4	7	15	6	2	—	—	73	
<i>Female</i>														
Nicosia	6	2	2	—	2	1	4	2	—	—	—	—	19	38
Larnaca	1	2	—	1	1	3	—	—	—	1	—	—	9	17
Limassol	4	1	1	1	—	3	2	—	2	1	—	—	15	29
Famagusta	1	1	1	1	1	2	3	1	1	—	—	—	12	36
Paphos	—	—	—	—	1	—	2	1	—	—	—	—	4	10
Kyrenia	—	—	—	—	—	—	1	—	—	—	—	—	1	3
Total	12	6	4	3	5	9	12	4	3	2	—	—	60	133
Grand total	26	10	8	9	16	13	19	19	9	4	—	—	133	

Cases by Race.

<i>British</i>	<i>Greek</i>	<i>Turk</i>	<i>Other</i>	<i>Total</i>
— ..	121 ..	10 ..	2 ..	133

Cases per 10,000 of Population per District.

Nicosia ..	..	..	..	..	..	3.2
Larnaca ..	..	..	..	..	..	3.7
Limassol ..	..	..	..	..	..	4.8
Famagusta ..	..	..	..	..	..	4.8
Paphos ..	..	..	..	..	..	2.2
Kyrenia ..	..	..	..	..	..	1.3
Whole Colony	..	..	..	..	..	3.6

Cases by Months.

January ..	15	May	16	September ..	3
February ..	4	June	30	October ..	7
March	5	July	24	November ..	12
April	3	August ..	9	December ..	5

DIPHTHERIA.

Sporadic cases of Diphtheria occurred during the year under report. 31 cases are reported.

Cases by Sex and Age Group.

	0—	5—	10—	15—	20—	25—	35—	Over 35	Total
Male ..	20	3	4	—	—	1	—	—	29
Female ..	10	4	—	—	—	1	—	—	15

Cases by Months.

January ..	11	May ..	1	September ..	5
February ..	6	June ..	2	October ..	2
March ..	5	July ..	—	November ..	1
April ..	3	August ..	2	December ..	6

Cases by Race.

<i>British</i>	<i>Greek</i>	<i>Turk</i>	<i>Other</i>	<i>Total</i>
1	35	6	2	44

TYPHOID.

There were 548 cases of Typhoid Fever reported during the year, an increase over the returns of 1934 and 1933 which were 411 and 428 respectively. There were general explosive epidemics in villages in Famagusta, Larnaca and Limassol Districts where the establishment of temporary Hospitals was found necessary.

As stated in my last year's Report the principal causes for many of the cases is considered the indiscriminate use of the open yard as a latrine and the absence of proper refuse disposal. The above and carriers have also to be taken into account.

There is need for a strong campaign for providing sanitary latrines particularly in the rural parts of the Island.

Very numerous T.A.B. inoculations were given particularly to those in villages where explosive cases of Typhoid Fever had occurred. Considerable difficulty and opposition is experienced in carrying out inoculation, and it often happens that many will not return for the second injection.

Oral Vaccine.—Two proprietary vaccines, manufactured by well-known firms, were tried. The main object was to test the value of such vaccines which, if satisfactory, would certainly overcome the difficulty experienced with the present method of injection.

The test was made on school children of two separate villages where cases of Typhoid Fever were known to exist, and the children selected were, as far as reliable information could be obtained, those who had not suffered from Typhoid Fever before.

The first group of children numbering 78 were from the village of Ayios Dhometios and were given the oral vaccine pills under supervision during the month of May. One child developed mild Typhoid Fever two weeks later and a second child three and half months from the date of taking the oral vaccine.

The second group of children was from the village of Eylenja where 70 children were given oral vaccine in August, and so far, no one of them has been reported as having developed Typhoid Fever.

It is too premature to report on the advantage of this sort of protection, and further proof is required in larger population groups in endemic unprotected areas.

The following table shows details collected from notification cards:—

<i>By Sex and Age Groups.</i>													
<i>Male</i>	0-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	NR.	Total
Nicosia ..	12	20	20	25	9	6	3	1	3	—	—	1	100
Larnaca ..	6	11	12	9	1	5	1	1	—	—	—	—	46
Limassol ..	3	4	12	5	4	3	—	—	—	—	—	—	31
Famagusta ..	11	12	8	3	4	—	—	2	—	—	—	—	40
Paphos ..	2	4	3	1	1	2	—	—	—	—	—	—	13
Kyrenia ..	—	3	—	4	2	2	—	3	—	—	—	—	14
Total ..	34	54	55	47	21	18	4	7	3	—	—	1	244
<i>Female</i>													
Nicosia ..	9	23	32	29	16	12	2	3	—	—	1	—	127
Larnaca ..	8	17	15	2	1	1	3	1	—	—	—	—	48
Limassol ..	5	8	11	6	7	4	3	—	—	—	—	—	44
Famagusta ..	7	15	5	3	6	6	3	—	—	—	—	—	45
Paphos ..	—	6	7	1	4	5	2	2	—	—	—	—	27
Kyrenia ..	2	2	3	2	1	2	—	1	—	—	—	—	13
Total ..	31	71	73	43	35	30	13	7	—	—	1	—	304
Grand Total	65	125	128	90	56	48	17	14	3	—	1	1	548

Cases by Months.

January ..	73	May ..	16	September ..	90
February ..	19	June ..	41	October ..	78
March ..	6	July ..	74	November ..	29
April ..	15	August ..	78	December ..	29

Cases by Race.

<i>British</i>	<i>Greek</i>	<i>Turk</i>	<i>Other</i>
—	454	79	—

Cases per 10,000 of Population per District.

Nicosia ..	19.4
Larnaca ..	20.7
Limassol ..	12.6
Famagusta ..	11.3
Paphos ..	9.0
Kyrenia ..	11.6
Whole Colony ..	12.0

Paratyphoid A.—Twenty-one cases have been notified from the following Districts: Nicosia 13, Limassol 5, Famagusta 2, and Paphos 1.

Paratyphoid B.—Nine cases are recorded; one from Nicosia District and eight from Famagusta.

Trachoma.—7,844 cases were seen during 1935 as compared with 11,918 in 1934.

Undulant Fever.—No case reported.

(c) *Helminthic Diseases.*

Schistosomiasis.—No cases were reported in the localized endemic area. Some years ago, I am informed, masses of the fresh water snail (*Bullinus*) could be scooped up in the ditches at Syrianokhori, but now with great difficulty after considerable search can more than a meagre few be obtained. Whether the intensive use of larvacides, in routine anti-malarial work, or the better care of the irrigation ditches be responsible is a moot point which I cannot decide. At any rate the disease I am convinced has about disappeared through the absence of the snail *Bullinus*.

Ascaris.—229 out-patients are recorded this year, as compared with 170 in 1934.

(d) *Leishmaniasis* (*Kala-Azar*).

I include as Appendix J a report by Dr. Theodosios Chr. Astreos, Acting District Medical Officer, Kyrenia, on a case of *Kala-Azar*, the first to be recognized in Cyprus.

(III) GENERAL MEASURES OF SANITATION.

Sewage Disposal.

Considerable progress has been made during the year in the way of the installation of septic tanks in new houses building and in houses where formerly a bucket system held and modern public latrines are either contemplated or have been erected in the principal Municipalities.

Rural disposal, however, remains a vexed problem and the entire lack of it is accountable, to a large extent, for a high typhoid incidence. I anticipate, however, being assisted in completely sanitating a large village during 1936 or 1937 and having done so, by utilizing co-operative societies feel that the movement will spread as it has done in the neighbouring countries of Egypt and Palestine. Whenever possible latrines of the "bore-hole" type will be installed.

(IV) SCHOOL HYGIENE.

The improvement reported last year continues, thanks to the Medical Officers and the activities of the Director of Education and his staff. The teachers are inclined to take a greater interest in the general sanitation of their schools and premises, latrines are being provided in increasing numbers and simple hygiene (personal and general) is being regularly taught.

The five Honorary Dentists visited 210 schools during the year under review, examined and treated 11,067 school children. Of these Dr. J. Marcellos visited 146 schools in the Nicosia-Kyrenia Districts and examined 5,296 pupils. His co-related results show 23% with sound teeth and 77% with defective teeth.

The School Medical Officer examined 1,428 pupils in the Paphos District in 36 schools and reports on their general health as follows :—

<i>Diseases</i>	<i>%</i>
of Skin	2.9
of Throat and nose	24.2
of Eyes external	18.9
Defective vision	0.7
of Ears	1.3
Mental conditions	4.5
of Nervous system	0.9
of Circulatory system	0.2
of Lungs	5.0
of Spleen	7.6
Infectious diseases	0.5

(V) INDUSTRIAL HYGIENE.

The Cyprus Mines Corporation and the Asbestos Mines are the main industries employing a large number of labourers; these companies have their own hospitals, medical and sanitary staff, and the health of the employees is well cared for.

There are, however, a considerable number of industries in the Island, some of which employ several hundreds of persons (mostly women of comparatively young age), which have no medical staff of their own. The sanitary arrangement as well as the general condition of the work-rooms of some, leave much to be desired.

(VI) HOUSING AND TOWN PLANNING.

The building committee (especially in the Nicosia District) have had a good deal to do during the year as building has been brisk. Building and Sanitation generally have been improved and infringements of the building regulations have been drastically dealt with. Much has been done by the Mayor and his Council in the way of widening streets, building new roads and improving the amenities in general in the Capital.

Due to the increasing construction of residences in Nicosia the cemeteries it was thought—especially as several of them have little burial space left—should be closed and new sites selected at greater distances from the municipal boundaries. All Congregations, *i.e.* the Church of England, Greek Orthodox, Moslem, Catholic and Maronites are selecting new approved sites and will be required to close their present cemeteries and conduct burials in the new cemeteries within a comparatively short time.

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

PUBLIC LECTURES.

Fifty-seven public health lectures were given during the year in the towns and villages to an aggregate attendance of 14,910. Separate addresses and cinema films were shown to the teachers, and pamphlets on hygiene and sanitation were prepared and issued to them.

HEALTH EXHIBITION.

The Annual Baby Show and Health Exhibition organized by this Department in co-operation with the Child Welfare Association of Nicosia, under the patronage of His Excellency the Governor, was a big success. The Exhibition was held in the Municipal Garden and was well attended. The organizers were successful in obtaining the co-operation of the Child Welfare Associations of Larnaca, Famagusta and Paphos to take part in a competition for a Challenge Shield presented by Drs. Neff and Cuff, for annual award to the District receiving the highest marks. In addition to this cash prizes were given to the winning babies, and for the best essay written on Child Welfare work and its advantages.

The following is a list of Sections of the Health Exhibitions:—

- | | |
|---------------------------|------------------------|
| 1. History of Medicine | 8. Bilharzia. |
| 2. Quack Treatment. | 9. Diet. |
| 3. Malaria | 10. Ophthalmia. |
| 4. Plague. | 11. Care of the Baby. |
| 5. Smallpox | 12. Sanitary Fittings. |
| 6. Typhoid and Dysentery. | 13. Dental Hygiene. |
| 7. Cancer. | 14. Meat Inspection. |

HOTELS LAW.

The Hotels Law and Regulations under the law governing the licensing and classification of all hotels, came into force during the year and a Hotels Board was subsequently appointed by His Excellency the Governor under the Chairmanship of the Director of Medical Services.

A comprehensive survey of all hotels was then planned and hotels routinely inspected and reported upon in regard to:—

- (a) Sanitation.
- (b) Structural defects.
- (c) Furniture and equipment.

A mass of work resulted both for the Board and my sanitary and office staff, but the results, in the way of improvement, have really been amazing.

The work continues and it is with pleasure I thank the Board and Mr. M. Aziz, M.B.E., Chief Sanitary Inspector, for the splendid assistance they have given.

PUBLIC HEALTH LECTURES ORGANIZED DURING 1935.

District	Number of Centres	Subject of Lectures							Total Number of Lectures	Approximate Attendance
		Pulmonary Tuberculosis	Typhoid	Malaria	Teeth	Veneral Disease	Cancer	General Hygiene		
Nicosia	14	3	4	5	3	5	—	2	22	7,150
Larnaca	5	4	5	1	2	2	—	—	14	3,100
Limassol	—	—	—	—	—	—	—	—	—	—
Famagusta	3	1	2	2	1	1	—	—	7	2,100
Paphos	4	2	1	3	2	2	1	1	12	2,260
Kyrenia	1	—	1	1	—	—	—	—	2	300
Total	27	10	13	12	8	10	1	3	57	14,910

SCHOOL FOR SANITARY INSPECTORS.

The fifth session of the Sanitary Inspectors' School in the form of a refresher course for pupils who had previously attended a full course, was opened on the 7th January to 27th March, 1935. 7 pupils attended the course and five of these obtained the Certificate of the Royal Sanitary Institute.

IV. PORT HEALTH WORK AND ADMINISTRATION.

The subjoined table shows the number of visits made by the Medical Staff to vessels arriving to Cyprus Ports during 1935 :—

District	Aeroplanes	Steamships	Sailing Ships	Total
Famagusta ..	— ..	169 ..	113 ..	282
Limassol ..	— ..	153 ..	195 ..	348
Larnaca ..	— ..	236 ..	102 ..	338
Karavostasi ..	— ..	71 ..	16 ..	87
Paphos ..	— ..	4 ..	102 ..	106
Kyrenia ..	— ..	3 ..	17 ..	20
Polis ..	— ..	— ..	— ..	—
Not ascertained	22 ..	— ..	— ..	22

Note.—Visits of His Majesty's Navy and Airships have not been recorded.

V. MATERNAL, CHILD WELFARE AND SOCIAL HYGIENE.

MATERNAL WELFARE.

The training of midwives continued during the year. There are two Government Midwives in Nicosia and two Honorary Midwives stationed at Limassol and Famagusta. Dr. H. Symeonides conducted the lectures at Nicosia during November and December and the examinations were held in January, 1936. 17 pupils attended the classes and 15 passed the local examination.

During the year 17 pupils started training and 13 pupils received the Government Certificate of Competency.

The Government Midwives with their pupils attended to 276 confinements during the year as follows :—

Nicosia, 150. Limassol, 82. Famagusta, 44.

Under the Midwifery Law of 1932, 5 Midwives holding diplomas of recognized schools and 13 trained in Cyprus were registered.

NICOSIA MATERNITY WARDS.

<i>Cases—</i>	(1) Normal	159	
	(2) Complicated	128	
		—	Total 287
<i>Deaths—</i>	(1) of Mothers	2	
	(2) of Infants born alive	4	
	(3) Still births	28	
<i>Sex—</i>	Male	150	
	Female	141	
<i>Operations—</i>	Instrumental delivery	8	
	Version	6	
	Removal of Placenta	2	
	Cæsarian section	3	
<i>Diseases and complications affecting mother—</i>			
	Malaria	12	
	Albuminuria	11	
	Anæmia	2	
	Lacerated Perineum	25	
	Placenta Prævia	7	
	Dysentery	1	
<i>Diseases and complications affecting Infant—</i>			
	Asphyxia	16	
	Ophthalmia	1	
	Spina Bifida	1	
	Monster	1	

CHILD WELFARE.

Child Welfare Clinics have, thanks to energetic committees, been usefully functioning in four of the six principal towns and the work at these clinics steadily increases. At Nicosia attendances have increased to such an extent that the premises in the hospital compound given over to the clinic are no longer suitable. Funds collected have been put aside and a new modern building will be erected during 1936 on a suitable site set aside and given to the committee on lease at an annual rental of one shilling. Government has consented to assist towards building fund and a sum of £117 is included in the 1936 Estimates for the purpose.

VI. HOSPITALS AND DISPENSARIES.

HOSPITALS.

There are Government Hospitals in Nicosia and Limassol and State-aided Hospitals at Larnaca, Famagusta, Paphos and Kyrenia. The accommodation in these Hospitals is 278 beds and 23 cots: The total number of admissions, during the year was 4,852.

The work at Nicosia General Hospital has increased to such an extent that scores of cases, who should have been admitted, necessarily had to be refused and the Staff there are continually harassed and worried to find temporary accommodation for the emergency cases who appear and have to be admitted. Added to this the Hospital is altogether unsuitable. It was built in 1886, has been added to throughout the years, allows for no separation of septic from aseptic cases or suitable isolation and the fear of cross infection is a very real one. Such a Hospital, as well, is difficult to work and maintain on modern lines.

It is with much pleasure, therefore, that I am able to report that plans for a new Hospital are being prepared and a sum of £12,000 is included in the draft estimates for its building. Work on construction will be started during 1936.

The new Hospital will amongst other things, have accommodation for 120 patients (including separate private rooms for 1st and 2nd class patients) will contain an aseptic and septic operating theatre, laboratory, X-Ray and electro-therapeutic section, administration, modern kitchens, staff quarters and large airy wards. The present hospital can then be utilized for medical cases, inoperable cancer and, at the same time, suitable isolation provided for infectious and contagious diseases.

A great improvement has been effected by the construction during the year of a modern post-mortem room and mortuary block. This was badly needed and necessary pathological examinations in routine clinical and police work can now be carried out in the satisfactory manner so essential. Also a place is thus provided where bodies of patients dying in Hospital can remain pending burial.

A portable X-Ray set was purchased and installed during the year at this hospital. It is needless to state how this has facilitated routine examination of fractures and other conditions which make it difficult or impossible to move the patient to the larger machine downstairs.

An ambulance, to be attached to Nicosia General Hospital, is also provided for in the estimates for 1936. This will fill a long-felt want in that patients, can thus be transported to the Hospital in a prone position and so in comparative comfort. The ambulance—on a powerful 8-cylinder chasis—will be available for most of the island and at ordinary taxi rates for those able to pay. This service will tend to centralize major surgical work at the Nicosia General Hospital where it later can be carried out under circumstances approaching the ideal.

Early in the year it was seen, on inspection, that the Government building used as a Venereal Diseases Clinic at Larnaca was so unsuitable structurally and of such a temporary nature that a new clinic was necessary if the mass of work there was to be carried out in a satisfactory manner. As a result provision has been made in the estimates for its construction during 1936.

In concluding this section I desire to compliment the Surgical Specialist, Matrons and Medical Officers in charge of Hospitals and Districts on the efficient way they and their Staff have accomplished their onerous, varied duties.

Further particulars are to be found in Appendix A.

SILVER JUBILEE FUND.

Collections were made in all Districts on the occasion of the Silver Jubilee of His late Majesty King George V, and were splendidly subscribed to. It was decided to utilize the money so collected at Nicosia and Limassol—where the Government Hospitals are situate—for the building fund of the new Tuberculosis Sanatorium and the funds collected at Famagusta, Larnaca, Paphos and Kyrenia towards improvement of their Government Aided Hospitals. As a result X-Ray sets have been provided for Paphos and Famagusta Hospitals, a maternity block is being built at Kyrenia, a modern building has been built at Paphos for the Nursing Staff and additional maternity accommodation is contemplated at Larnaca Hospital.

RURAL HOSPITALS.

The value of these small Rural Hospitals continued to be apparent. Their numbers have increased by one—formally opened by His Excellency the Governor during the year at Morphou—and so are established now at Klirou, Pedhoulas, Yialousa, Agros and Morphou. The villages of Polis and Lefkoniko propose opening Hospitals there and Lysi is now building a Hospital—to serve their own and five or six surrounding villages—with funds subscribed and collected there. This is really a splendid example for village co-operation. Plans were furnished from this Department and the completed Hospital will include a Doctor's residence, a dispensary and out-patients department as well as the Hospital building proper.

Government aids each Hospital to the extent of £18 per annum and provides the Medical Officer and Compounder. Otherwise, they are maintained entirely by local subscriptions and hospital fees.

LEPER FARM.

The work being carried out there is in the capable hands of Dr. H. Symeonides and Mrs. H. H. Hunter, Matron. The Director of Medical Services visits the institution, as far as possible, weekly on Fridays for inspection and to deal with petty breaches of discipline and misdemeanour.

The whole question of the care and treatment of leprosy here together with recommendations for improvement will be the subject of a special report in due course.

Leper Farm.—Statistics for 1935.

Number of Lepers in the Farm on 31st Dec., 1934	88
Admitted during 1935	19
	—107
Paroled in 1935	3
Died	2
	— 5
Remaining on 31st December, 1935	102

The number of Lepers segregated in the Farm has increased as compared with last year.

Leper Farm Hospital.—This Hospital is situated in the limits of Leper Farm and has accommodation for 12 patients.

The total number of admissions during the year was 94.

A clinic is attached to this Hospital where the lepers are given their injections and dressings. 3,228 injections with 13,158 dressings were carried out in this clinic during the year under review.

SANATORIUM.

The question of Tuberculosis has been discussed elsewhere but there is good reason to believe that the accommodation at this institution will be substantially increased during 1936.

During the year Dr. Takis K. Evangelides was appointed as Honorary Physician to the Sanatorium. This was very desirable as the Medical Officers doing duty at Nicosia had not the time to give the patients there the attention they merit. Dr. Evangelides was trained in England at the Brompton Hospital as was Miss C. A. Wyeth, the Matron, and splendid work has resulted. There is a spirit of optimism and content at this institution not seen before and the general work being accomplished can best be judged by the increasing number of patients coming to the quiescent stage and discharge.

This institution has 40 beds.

The number of admissions during the year was 45 with 22 deaths. The following are statistics for the year:—

Remaining on 31st December, 1934	35
Admitted during the year	45
	— 80
Discharges during the year	19
Died	22
Remaining on 31st December, 1935	39
	— 80

MENTAL HOSPITAL.

The Hospital, where numbers have increased during the year, has been maintained and operated by the Medical Superintendent, Dr. S. Lysandrides, in the usual satisfactory manner.

During trips of inspection I have been struck by the absence of an isolation Hospital for inmates needing specialized treatment for physical or crowd diseases and funds to construct a 12-bed hospital have been included in the 1936 estimates. This was a pressing necessity.

The Medical Superintendent's Report is included as Appendix E.

DENTAL CLINICS.

During the year Honorary Dentists have been appointed at Paphos and Famagusta so that now Dentists are doing duty in all Districts. An effort has been made to interest all Dentists in work in the schools and to this end Dr. Marcellos, Honorary Dentist for Nicosia and Kyrenia Districts, a capable officer of unbounded enthusiasm and considerable ability, has been posted as Honorary Dentist-in-Charge of all Districts and travelling allowance made available for this duty. It is hoped that soon travelling allowance may be allotted to all these dentists and their scope of work extended accordingly.

Report by Dr. J. Marcellos is included as Appendix G.

The following are statistics for their work done during the year.

Statistics.

	Consultations	Abscess treated	Extractions	Fillings				Sealing	Other diseases of the mouth	Plates
				Amalgam	Cement	Porcelain	Other			
Nicosia ..	7,095	210	2,461	1,073	139	87	487	378	757	12
Larnaca ..	8,152	106	778	88	3	2	118	21	290	—
Limassol ..	3,042	18	555	139	—	18	3	39	27	—
Famagusta ..	1,485	13	540	10	3	—	47	—	253	—
Paphos ..	1,815	19	400	83	18	4	354	79	18	—
Kyrenia ..	1,075	40	709	212	36	13	88	58	91	2

Full reports of the work done are available at this office.

EYE CLINICS.

The total work done at these institutions both at the Hospitals and by the Travelling Oculists is recorded in the table of diseases.

There are three Travelling Oculists on the staff who attended the following patients during the year :—

	<i>Limassol-Paphos</i>	<i>Nicosia-Kyrenia</i>	<i>Famagusta</i>
New cases	2,212	2,767	5,181
Secondary treatments	6,580	2,856	5,722
Trachoma	1,347	1,097	3,998
Operations	—	49	113

The Honorary Oculists attended the following patients :—

	<i>Larnaca</i>	<i>Nicosia</i>	<i>Limassol</i>
New cases	1,276	1,949	2,343
Secondary treatments	3,615	1,468	8,749
Trachoma	434	589	1,254
Operations	83	17	18

It is with pleasure I record the excellent work performed by Medical Officers holding honorary appointments. In this connection I especially wish to mention Dr. M. Coureas, Honorary Physician to Nicosia General Hospital, for his assistance given in so many ways and to Dr. A. Gavrielides, Honorary Consulting Surgeon, Limassol Government Hospital, for his excellent assistance in surgical work at Limassol.

**STATEMENT OF THE AMOUNT OF WORK PERFORMED YEARLY AT THE SIX
HOSPITALS FOR THE YEAR 1935.**

District	In-patients	Day-cases	% Deaths to No. of in-patients	Dressings	Major operations	Maternity cases	Number of beds	Number of cots
Nicosia	1,669	24,600	5.8	44,580	801	287	90	4
Limassol	675	26,161	6.6	6,442	330	114	47	4
Larnaca	843	9,200	3.4	9,260	290	76	48	4
Famagusta	691	7,849	2.1	6,587	160	58	38	5
Paphos	419	1,425	5.0	1,975	70	13	25	4
Kyrenia	555	4,466	3.0	5,506	50	56	30	2
Mental Hospital ..	—	—	—	—	—	—	—	—
Sanatorium	80	14,423	27.5	—	—	—	40	—
Leper Farm Hospital	94	1,167	2.1	—	—	—	12	—

DISPENSARIES.

There are 6 District Dispensaries attached to each Hospital and 23 Rural Dispensaries scattered over the whole Island.

The following figures show the work carried out in each Dispensary.

Place	No. of new cases	No. of old cases	No. of Dressings	No. of prescriptions executed
Nicosia	21,945	13,279	44,580	98,182
Larnaca	7,938	5,421	9,260	26,528
Limassol	11,748	14,781	6,442	53,435
Famagusta	6,794	3,579	6,587	25,858
Paphos	5,060	3,065	1,975	15,584
Kyrenia	4,034	432	5,506	13,008
Morphou	1,982	1,124	449	7,147
Lefka	2,983	663	789	6,234
Pedhoulas	760	1,647	222	941
Pyrghos	1,055	126	224	1,634
Nisou	513	311	48	1,501
Klirou	1,317	846	1,056	3,277
Paleokhorio	557	449	—	1,453
Athienou	1,209	1,007	443	3,235
Kophinou	3,798	4,291	1,020	12,498
Agros	3,733	3,456	1,145	8,331
Pakhna	3,919	1,065	128	5,680
Kellaki	1,091	517	54	1,103
Perapedhi	2,509	403	82	5,513
Yialousa	2,946	3,281	420	9,100
Trikomo	1,193	628	564	9,333
Lefkoniko	2,690	1,531	939	10,156
Vatili	1,474	1,361	491	4,739
Polis	1,562	517	72	4,158
Lyso	157	53	—	417
Stroumbi	783	273	52	1,179
Pano Panayia	491	79	54	836
Kelokedhara	874	631	110	1,020
Myrtou	629	114	46	1,006

VII. CONTROL OF PROFESSIONAL PRACTICE.

(a) *Medical Council.*—The Medical Assessors, who function as a Medical Council, met on five occasions during the year.

(b) *Medical Practitioners.*—11 Medical Practitioners were registered during the year with qualifications from the following schools:— Athens, 8; Canada, 1; Edinburgh, 1; London, 1.

(c) *Dental Practitioners*.—6 dentists were registered; 5 from the school of Athens and 1 from the University of Beirut.

(d) *Druggist and Pharmacists*.—11 were registered: 10 local and 1 from Athens.

(e) *Control of Dangerous Drugs*.—This is not satisfactory and the laws and regulations dealing with the matter of control are being revised and strengthened.

The number of permits issued for the local transfer of dangerous drugs between authorized persons is 183.

Five persons were prosecuted for illegal possession of Cocaine, four of which were convicted and bound over. No fine inflicted.

TABLE SHOWING THE AMOUNT OF DANGEROUS DRUGS FOR WHICH LICENCES TO IMPORT HAVE BEEN GRANTED DURING THE YEAR 1935.

Name of Drug	Quantity		
	No.	Kgs.	Litres
PURE DRUGS.			
Codeine (Methylmorphine)	—	0.336698	—
Eucodal (Dihydro-oxycodine)	—	0.000780	—
Medicinal Opium	—	0.263349	—
SALTS.			
Codeine Phosphas	—	1.017524	—
Cocaine Hydrochlor	—	0.398445	—
Morphine Hydrochlor	—	0.093979	—
Ethyl Morphine Hydrochlor (Dionine)	—	0.135000	—
Codeine Hydrochlor	—	0.010000	—
Diamorphine-Hydrochlor (Heroine)	—	0.135000	—
PREPARATIONS.			
Ampoules Morphine Hydrochlor 0.01	5286	—	—
“ “ “ 0.02	5102	—	—
“ “ et Scopolamine 0.01	100	—	—
“ Atropomorphine 0.01	50	—	—
“ Sedol	966	—	—
“ Pantopon	100	—	—
“ Dilaudid 0.002	40	—	—
“ Dicodid 0.015	12	—	—
Extract. Cocæ Liq.	—	—	1.700000
“ Opii Sic.	—	0.223949	—
Tincture Cocæ	—	—	2.750000
“ Opii	—	—	2.850000
“ “ Crocata	—	—	5.150000
Granules Extr. Opii 0.01	150	—	—
“ “ “ 0.02	150	—	—
“ Terpine Boveil 100 boxes × 100.0	—	10.000000	—
Hypodermic Tablets Morphine Hydrochlor.			
“ “ “ 0.00054	480	—	—
“ do. do. 0.008	480	—	—
“ do. do. 0.016	480	—	—
“ do. do. 0.032	240	—	—
Tablets Dicodid	1360	—	—
“ Dilaudid 0.002	100	—	—
“ Pantopon 0.01	120	—	—
Liq. Morphine Hydrochlor	—	—	16.000000
Sirop Codeine Phosphas	—	—	10.000000
“ Bromoform “Lug” 60 bottles × 180cc	—	—	10.800000
“ Ethyl 25 bottles × 100cc	—	—	2.500000
“ Bromoform 78 bottles × 180cc	—	—	14.040000
Bromo Chloral 10 “ × 100cc	—	—	1.000000
Pantopon Pulvis	—	0.020000	—
Cardiazol Dicodid Liq. 0.05 vials	10	—	—
Supposedol Morphine et Scopolamine 0.006	75	—	—

VIII. METEOROLOGY.

METEOROLOGICAL RETURN FOR THE YEAR 1935.

	Temperature					Rainfall		Winds		Average Force (9-10)	Remarks
	Solar Maximum °F	Minimum on Grass °F	Shade Maximum °F	Shade Minimum °F	Range °F	Mean °F	Amount in inches	Degree of Humidity %	General Direction		
January ..	127	25	64	33	31	48.50	1.96	79.02	E.	2.00	Cold weather.
February ..	134	29	67	37	30	52.00	1.92	75.14	SE & NW	2.14	Cold weather.
March ..	139	32	75	38	37	56.50	1.60	69.09	N.W.	2.45	Fair weather.
April ..	147	35	91	43	48	67.00	1.10	66.70	N.W.	1.47	Fair weather.
May ..	158	40	105	51	54	78.00	—	52.54	N.W.	2.44	Hot weather.
June ..	161	35	106	62	44	84.00	—	53.54	N.W.	1.35	Very hot weather.
July ..	162	34	105	62	43	83.50	—	57.31	N.W.	1.69	Very hot weather.
August ..	159	37	102	61	41	81.50	—	61.50	N.W.	1.13	Very hot weather.
September ..	157	46	100	55	45	77.50	0.12	67.03	N.W.	2.34	Hot weather.
October ..	158	44	90	52	38	71.00	0.03	64.09	N.W.	1.03	Hot weather.
November ..	137	34	74	42	32	58.00	3.02	76.09	E.	0.68	Cold weather.
December ..	131	31	73	40	33	56.50	0.88	80.13	S.E.	1.02	Very cold weather.
	147.50	35.16	87.66	48.0	39.66	67.83	0.97	66.21		1.64	

IX. SCIENTIFIC.

PUBLICATIONS.

- (1) "A Survey of Malaria in Cyprus," by Dr. M. A. Barber.
- (2) "Tetanus following Circumcision," by M. Gosden. *Trans. Roy. Soc. Trop. Med. and Hyg.*, XXVIII, 6, pp. 645-48, April, 1935.
- (3) "Acute Intussusception in an Adult," by C. H. Cuff and M. Gosden. *Brit Journ. of Surg.*, XXII, No. 87, 1935.

X. RECOMMENDATIONS.

1. A building to include accommodation for Out-patients, Consulting, Examination rooms and Dispensary on Troödos.
2. An ambulance for the Limassol and Paphos Districts.
3. A Public Health Unit for duty in respect of the Resort places during the summer season. This unit to include a Medical Officer of Health.
4. A full-time Dental Officer.
5. A Training School for nurses.
6. Legislation—
A new law to strengthen Malarial control.

ERROLL A. NEFF,

Director of Medical Services.

APPENDIX A.

ANNUAL REPORT OF THE SURGICAL SPECIALIST FOR THE YEAR 1935.

By CYRIL H. CUFF, O.B.E., M.B., B.S., F.R.C.S. (Ed.),

Specialist (Surgeon), Cyprus.

Routine work in the various Hospital and Dispensaries throughout the Colony has somewhat increased, and attendances in the Out-patient Departments and the number of admissions, indicate clearly the esteem in which these institutions are held by the general public. The demand for beds always exceeds the supply, and at times, during 1935, the situation became serious, especially in Nicosia, where patients were regularly refused admission owing to insufficient accommodation.

This unfortunate state of affairs, will, it is hoped, be remedied very shortly by the erection of a new and modern Hospital, which, together with a part of the old one, will provide the necessary room.

In this connection it may be pointed out that at present no chronic or hopeless case can be admitted, and many unfortunate poor persons suffering from painful and incurable conditions, especially cancer, have to be sent back to their villages, where they die miserably.

RADIOLOGICAL DEPARTMENT.

With the appointment of Dr. H. Rassim, D.M.R.E., to the charge of this Department, the work has been put upon a proper basis, and the results obtained are highly satisfactory. Miss E. Papadroussioutou was appointed as an assistant and has rendered valuable aid in her new post.

The pantostat, diathermy and ultra-violet apparatus have been in daily use, and proved very valuable. The establishment of a dark room in the Department has resulted in increased efficiency and economy.

When possible, a new X-Ray plant will be required, capable of being used both for diagnosis and treatment. Improvements to the present machine are being undertaken shortly.

GENERAL SURGERY.

Table (1) indicates the general scope of work carried out during the year.

The Böhler system of the treatment of fractures has been continued, and the results obtained have been satisfactory. Thanks again to Dr. Smitten of Pendaria, we have had the use of certain appliances, pending the arrival of our own.

Reduction and continued skeletal traction with a pin driven through the bone, has given particularly good results in cases of fractures of the femur and tibia. Careful attention to Böhler's technique is, however, essential.

Three other cases of intestinal rupture which occurred, two from external violence, and one, a child of 5, from typhoid, made successful recoveries.

Post operative radiation has been continued in cases of Carcinoma of the breast. Most of these cases present themselves in an advanced stage of the disease, and the operative treatment resolves itself into amputation and a block dissection of the glands. This is followed by external radiation with radium, mounted on a Sorbo-rubber caste, about 15,000 milligramme hours being the usual dose.

The results so far, indicate a very definite retardation in the appearance of metastasis and there are patients treated 4 and 5 years ago, who have no recurrence up to date.

With reference to the severe pain so often experienced in the latter stages of this condition, a trial has recently been started with injections of Cobra-toxine, and it is hoped that next year some useful information on the subject may be available.

Four cases of avulsion of the phrenic nerve were undertaken during the year, for cases of pulmonary tuberculosis, and the immediate effect of the operation on the progress of the disease appears to have been satisfactory.

Three cases of tubercular peritonitis were treated by a combination of laparotomy and exposure to ultra-violet light. This makes a total of nine patients thus dealt with, and the results have been very satisfactory.

The *modus operandi* consists in opening the abdomen, swabbing up the fluid present, and then allowing the Rays from a carbon arc lamp to play upon the intestines from various angles, for a period of about fifteen minutes.

The immediate effects are marked. The patient's general condition rapidly improves, especially the colour of the face. Appetite increases and there is a general sense of well-being. As far as we have been able to trace, relapses are uncommon. It is hoped to give further details of this system of treatment in a separate paper, later.

We are indebted to Dr. Coureas, Honorary Physician, Nicosia, for the suggestion, and for the loan of his lamp.

The first three Cypriot girls to commence the Nursing Course at the American School, Beirut, began their studies in October, and reports of their progress, up to date, are very satisfactory. It is proposed to send another three during 1936. The course, which lasts for three years, is a thoroughly up-to-date one, both practically and theoretically, and it is hoped that, on their return, these Nurses will be able to undertake the duties of local Sisters.

NEW HOSPITAL, NICOSIA.

Various preliminary plans of the proposed new Hospital at Nicosia have been considered, and it is generally agreed that the new building should be on a two-storey plan, with the Surgical Department and theatres upstairs and the Medical Department, X-Rays and administration below. Provision will be made for 120 patients, including 10 private beds in separate rooms. It is anticipated that building will commence in 1936.

AIDED HOSPITALS.

These four institutions are continuing their good work, though still embarrassed from lack of adequate funds. The public unfortunately do not take sufficient interest in their District Hospitals and look too much to Government to support them. Considering that the Medical Officers, Compounders, drugs, dressings and instruments are supplied by the Government together with a financial allotment, it seems reasonable for the public to provide the necessary balance.

Through funds collected on the occasion of the Silver Jubilee of His late Majesty King George V, Paphos and Famagusta have each been able to acquire a good modern portable X-Ray apparatus, with which they are obtaining excellent results. All these Hospitals are visited regularly by the Surgical Specialist, Honorary Oculists and Honorary Dental Surgeons.

A REVIEW OF RADIUM THERAPY FOR CANCER, IN CYPRUS, 1930 TO 1935.

December, 1935, saw the completion of six years' work on the treatment of certain types of cancer with Radium, in Cyprus, and the following report will deal with the subject, generally.

During this period, some 370 cases of malignant disease, of varying types, have been dealt with, the majority by radiation alone, and it can be stated at once that the results on the whole have been encouraging.

It may be of interest to mention here the reason why Radium was obtained and put into use in the Colony. *Firstly*, it had been observed for some years that the number of cases of cancer noted annually was considerable, and apparently increasing. *Secondly*, a more careful review of these cases revealed the fact they fell into certain predominant groups, and that these were pre-eminently radio-sensitive. Briefly the types commonly seen comprised three classes:—

- (1) Rodent Ulcer and Epitheliomata of the face, lips, etc.
- (2) Carcinomata of the cervix uteri.
- (3) Various types of Sarcoma, principally lympho-sarcoma, and breast growths.

Thirdly, the stage at which patients usually presented themselves for examination was far advanced and beyond the scope of ordinary surgery, *e.g.* devastating growths of the face, involving cheeks, lips, nose, eyelids, etc., fungating tumours of the cervix, extending to the vagina and parametria, and huge masses of sarcomatous growth in the neck and elsewhere. Bearing in mind the fact that most of these neoplasms were of a radio-sensitive nature, the question of Radium arose.

Owing to a generous gift of Mr. D. Demetriou, O.B.E., of Larnaca, the Government decided to try out the experiment, and a quantity of 125 mg. of Radium Element was obtained.

This amount is distributed as follows:—

	Total length	Internal length
20 needles of 5 mg. R.E. each	15 mm.	—
15 " " 1 " " "	27.7	16.2
10 " " 2 " " "	44	32.2
10 " " 3 " " "	60	48.2
10 " " 5 " " "	21.70	15.50

The needles are of platinum, iridium pointed and with a screenage of 0.5 mm. They are stored in a special fire-resisting safe, 6 inches thick, in a series of unit blocks of rectangular steel tubes, surrounded by 32 solid lead units $8" \times 1\frac{1}{2}" \times 1\frac{1}{2}"$.

As is well known radium and its salts, or emanation, gives off three Rays, the α , β and γ . In cancer therapy, only the last is utilized. This is a high tension vibration in the æther comparable to the X-Ray, with a velocity equivalent to light, and great powers of penetration. Approximately the whole of the α and β rays are absorbed by .5 mm. of platinum.

The question of how radium acts is still a debatable one, but it certainly appears to have a selective action on malignant cells. On the normal cell it acts with the greatest rapidity on those which show the maximum reproductive activity, *e.g.* the ovary, testis, and lymphoid tissue, etc., (Birkett), and on cells undergoing karyokinesis, (so often seen in neoplastic tissue). The more undifferentiated the tissues, the more radiosensitive they appear to be, *e.g.* a growth in the posterior third of the tongue and a lympho- or round celled sarcoma are much more sensitive than a squamous ulcer of the anterior third of the tongue or a fibro-sarcoma. At the same time it should be noted that these sensitive types are more prone to early metastasis.

DOSAGE.

The next question to be considered is the dosage. This, as far as we are concerned, has been largely empirical and has been based roughly, in the cases where the size of a growth can be estimated, on the principal that 1 mg. of R.E. can destroy one cubic centimetre of malignant tissue in 5–6 days. This again is fallacious on account of the varying sensitivity of the different histological types. Distance from, and the number of radium foci have also to be considered. We have endeavoured to give more detailed information in our tables by quoting the number of milligrammes employed, filtration (.5 mg. platinum) duration of exposure, milligramme hours and nature of application, whether surface (sponge 3 cms. thick), interstitial or intracavitary.

Even so, we have been unable to lay down any hard and fast rule for dosage, as different types of growth require longer or shorter periods of radiation, or larger or smaller quantities with a varying time factor. The size of a tumour and the amount of radium available had also to be taken into consideration, hence the remarkable difference in dosage to be observed in some of the tables.

It is a point worth noting that, with increased experience one can often, by carefully observing the appearance and dimensions of a growth, form almost automatically, an approximate idea of the quantity and nature of the radium required and of the time period. This applies particularly to surface tumours, or others that are visible. In the cases of carcinoma of the cervix we have arrived at a fixed technique and dosage for all cases.

The question as to whether radiation with a small quantity over a long period is preferable to the reverse, is also an unsettled one, but on the whole, our experience is in favour of the former.

It should be born in mind also, that the further the source of radiation is from the area which it is desired to radiate, the greater the homogeneity but the less the intensity (law of the inverse square). At the same time, with such small quantities as have been at our disposal, this is not such an important factor.

SELECTION OF CASES.

The use of radium, like any other therapeutic substance, should be carefully controlled and only employed when definitely indicated for a specified and approved purpose.

Having due regard to the knowledge which we possess as to its action, and results produced in well authenticated instances, and also remembering the inevitable risks attached, we have only used this agent where the following indications existed:—

- (a) Prospect of cure.
- (b) Palliation.
- (c) Prolongation of life (Birkett).

The first consideration in this connection is the histological nature of the neoplasm which it is proposed to treat.

As has been mentioned previously, different types of growth react in varying ways to the γ Ray of radium and before employing this element as a primary therapeutic agent, it is desirable to be sure that the particular growth is: (a) radio-sensitive, or (b) radio-resistant.

In the latter case one must decide whether some other form of treatment will be more beneficial. In our limited experience the following histological types react well to radium: (1) Basal celled carcinomata (rodent ulcer). (2) Squamous celled carcinomata, particularly of the lip, cheek, and cervix uteri. (3) Lympho- and round-celled sarcomata. Adeno-carcinomata of breast, uterus and rectum have proved, on the whole, disappointing, as have also fibro-sarcomata. The melanomata react well in the first instance, but rapidly form metastasis.

GROUPING OF CASES.

This we think requires some explanation. In the first instance it must be borne in mind that there has been no Radiological Clinic or Expert established in the Colony and consequently the work carried out has been a side line of the General Surgical Department.

Granting this proviso, our local experience showed that all the cases presented for treatment with radium fell into three broad classes:

- (a) Growths affecting the face, lip, cheek, tonsil, etc. .. 65%
- (b) Carcinoma of the cervix uteri 25%
- (c) Growths of other sites 10%

We realize that in a well-established radiological clinic such nomenclature is primitive, but having regard to local conditions we have been obliged to adopt this simple scheme.

With regard to the special grouping of carcinoma of the cervix uteri we have adopted the classification recommended by the Radiological Sub-Commission of the League of Nations, namely into four stages.

Stage I.—Growth is limited to cervix. Uterus mobile.

Stage II.—Lesion spreading into the fornices and uterus retaining some mobility.

Stage III.—Nodular infiltration of the parametria extending to pelvic wall, with limited, or no, mobility of uterus, and pelvic metastasis.

Stage IV.—Massive infiltration of both parametria extending to pelvic wall. Involvement of bladder, rectum or vagina. Remote metastasis.

TECHNIQUE EMPLOYED.

The decision as to which of the various routine techniques should be applied to an individual case depends on many factors, among which the following have to be taken into consideration :—

- (1) Site of the growth.
- (2) Its histological nature.
- (3) General state of health.
- (4) Risk of injury to normal tissues.

The methods of application which we have found possible to adopt in this Colony are four :—

- (a) *Surface application*, i.e. the radio-active substance is mounted on a suitable apparatus and applied externally.
- (b) *Intracavitary*, i.e. the radium is introduced into one of the natural cavities of the body, e.g. the uterus, rectum.
- (c) *Interstitial* in which the radium needles are introduced directly into and around the growth.
- (d) *Surgical approach*, i.e. where an operation is required in order to obtain access for the adoption of either of the above methods.

Surface application has usually been made by means of either a Columbia paste caste, Sorbo rubber sponge or a dental apparatus. The needles are either embedded in the wax or attached with strapping, and covered with lint, the usual distance from the growth being 1.5 cm.

The types of case for which this method is usually employed are squamous epitheliomata of the skin, the flat ulcerated type of rodent ulcer, certain type of sarcoma, glandular areas, and post operative radiation, e.g. after amputation of the breast.

It has also been applied successfully by means of a dental apparatus to growths of the alveolus and palate.

In surface radiation, as a rule, a piece of lead sheeting 1 mm. thick is affixed to the outer side of the appliance as an additional protection. This is especially indicated when treating growths near the eye and the axillary glands. As a general rule, we have aimed at providing one milligramme of radium, per c.mm. of the area to be radiated. The needles used depend on the particular case.

Intracavitary application has been confined for practical purposes to the treatment of growths of the cervix uteri. Our technique in these cases has been a combination of (b) and (c). Twenty-five milligrammes of R.E. are introduced into the cervix, enclosed in rubber tube 2 mm. thick, with anchoring cord of thick silk. Thirty milligrammes divided into 10 needles of 3 mg. each are then introduced in a circular manner around the circumference of the cervix and into the basis of the broad ligaments. These also are retained by silk threads. The vagina is then packed with flavine gauze, which is changed every other day. The length of treatment is 6 days and a total of 7,920 milligrammes hours thus administered.

Interstitial application implies the insertion of the radio active foci into the tissues, either subcutaneously or following an open operation. This method is used principally for such conditions as epithelioma of the lips, tongue, penis, tonsil, hypertrophic rodent ulcer, skin and certain gland metastasis, and retro-bulbar tumours (bladder) vide *infra*.

Our aim has been to provide a dosage of 1 mg. of R.E. per cubic centimetre of growth, and the needles in common use for this technique are of .5 and 1 mg. content each. The essential point to bear in mind is to form a barrage around the periphery of the tumour.

Surgical approach has been made use of principally in the treatment of growths of the bladder, of branchial carcinoma of the neck and of carcinoma of the rectum.

The area to be radiated having been exposed by surgical means, the needles have as a rule been inserted into the tumour and the threads brought out through a rubber tube.

A combined treatment by electro-coagulation and radiation has given good results in certain cases.

TREATMENT OF LYMPH FIELDS.

The primary growth having been adequately treated, the question of dealing with the adjacent lymphatic area naturally arises. With large quantities of radium and deep X-Ray facilities this is not so difficult, but with the small supply available to us and the number of patients awaiting treatment, the problem was a difficult one.

Where a block dissection could be carried out, as in the neck, following radiation of the lips, tongue, breast, etc., we have done so, about three weeks after radiotherapy. Where this is impracticable or contra-indicated, prolonged treatment has been given by surface radiation, or surgical exposure and insertion.

COMPLICATIONS NOTED.

Generally speaking these were few, and not serious. Loss of appetite after the first day or two was common, and a diminution in the amount of urine passed was noted in a few cases. Vomiting occurred in some of the cervix cases and also diarrhoea, but was always amenable to simple treatment. A slight rise of temperature was common.

Radio-necrosis of bone was seen on only two occasions, an epithelioma of the floor of the mouth and a sarcoma of the maxilla. Before radiating the alveolus, cheek, tongue or lips, adjacent teeth are always removed. Very few changes were noted in the blood picture. In prolonged radiation there was sometimes a fall in the total red blood count and in the number of polymorphs, but this was quite temporary.

DIAGNOSIS AND BIOPSY.

The diagnosis in most of our cases was abundantly clear on clinical investigation, and histological examination was only undertaken in doubtful cases. Unfortunately these were few and far between. We are of the opinion that routine biopsy is liable to be the cause of possible dissemination and should, therefore, be discouraged. In any case there is no undue risk in the employment of radium in a doubtful case, and if it is used carefully, and with proper regard to general principles.

CHOICE OF RADIUM OR SURGERY.

This is a problem which presents itself from time to time and each case must be decided upon in the light of accumulated experience.

The adeno-carcinomata, as has been remarked, are comparatively radio-insensitive and are found commonly in the breast, corpus uteri and rectum. Surgical removal appears, up to the present, to give the best end results, and in our opinion should be generally employed. Radiation before or after operation is often useful. Then there are certain small growths of the lip, rodent ulcers of the face and the melanomata, which are easily removed surgically and give equally good results. Where radium is available in small quantity and in big demand, this is a consideration.

USE OF RADIUM IN BENIGN CONDITIONS.

Radium has been employed by us in the following benign conditions:—

- (1) Nævus.
- (2) Lupus.
- (3) Metrorrhagia.

In the first two instances surface applications have been made and the results, on the whole have been satisfactory. In cases of uterine hæmorrhage, especially about the menopause, organic disease being excluded, 25 milligrammes of R.E. are introduced within the uterus enclosed in a rubber tube, 2 mm. thick. The duration of treatment is 3 days, and a total of 1,800 milligrammes hours is obtained. The results are highly satisfactory.

RECURRENCE.

Recurrence of a growth locally, after complete disappearance, was rarely noticed, and usually occurred in cases of Rodent Ulcer. Incomplete disappearance was more frequent and a difference of behaviour of apparently similar tumours, treated under identical conditions of dosages and technique, was often remarked.

We are inclined to think that most of the local recurrences were probably due to inadequate or badly planned radiation in our earlier cases, as with increased experience they occurred less frequently.

SUBSEQUENT TREATMENTS.

About 8 per cent. of the cases received two or more treatments and it was observed that these secondary applications were seldom as satisfactory as the first, even in small lesions, and that a much larger dose was required to effect the disappearance of the growth. This may be due to changes produced in the stroma and blood supply caused by the initial radiation or possibly to an immunization to the X-Rays acquired by the malignant cells themselves.

Failure to react in cases where secondary treatments were given, occurred most frequently in squamous epitheliomata of the cheek, tonsil, palate and penis.

PALLIATION.

As a palliative for inoperable cases of cancer, radium is unsurpassed. The effects which it produces on the growth is followed rapidly by a psychological change in the patient. The disappearance of foul hæmorrhagic vaginal discharge, fungating ulcers of the breast, penis, lip, etc., or of large sarcomatous growths in the neck, causing dysphagia and dyspnoea, result in a new lease of life and hope for them, which is a source of satisfaction to all concerned in the treatment of these sad cases. If for no other reason than such palliation, the introduction of radium into the Colony has been fully justified.

RECORDS AND FOLLOW UP.

From the commencement we adopted a system of recording used by Prof. Hartmann of the Hotel Dieu in Paris, consisting of 6 coloured cards contained in an envelope, for each patient. These cards detail the general history, radium treatment, any operative intervention, histological findings, subsequent treatments, and general notes. We have found these convenient and adequate. Each patient is given a serial number which corresponds to his number in the Radium Register, so that reference is simple. Follow up of cases is rather more difficult, as many of our patients are very primitive and are sometimes even doubtful about their names and addresses. However, with the aid of medical men and the Mukhtars of villages we are able to obtain regular information in most instances. Where patients do not report on the day requested, a note is sent to them asking that in their own interest they will do so, early. If this is unsuccessful a card is sent to the Mukhtar of his or her village asking present condition of patient or, if dead, date and cause of death. We are much indebted to the Mukhtars for their help in this connection. Of 329 cases we have only lost touch with 16.

RESULTS.

A study of the subjoined tables will indicate briefly the results of radium therapy as obtained in Cyprus during the period January, 1930–December, 1935.

In studying these we hope that it will be borne in mind that the work was carried out as an experiment in the general surgical division, without skilled assistance, and that, therefore, we may be excused for any defects that may be noted in them. Prior to commencing this method of treatment studies were carried out, while on vacation in Radium centres at Rome, Milan, Paris, London and Stockholm.

The tables referred to are the following :—

- (a) Tables showing the results annually of the three topographical groups (two types).
- (b) Tables showing the details of each group for the year 1935.

Taking first the three groups into which we have divided our cases :—

- I. Growths affecting the face, lip, cheek, tonsil, etc.
- II. Growth of the cervix uteri.
- III. Growths of other sites.

Class I.—This class contains 65 per cent. of all cases and comprises basal-celled and squamous epitheliomata. In the case of the basal celled growths (rodent ulcers) which form the majority, we have obtained good results, *i.e.* an apparent cure, in 80 per cent. of our cases. The growths react well to either surface or interstitial radiation, disappear rapidly, leaving a smooth scar, and seldom recur.

With the squamous epitheliomata our results have not been so satisfactory in this region. Ulcers of the lip and alveolus have reacted well and metastasis has been unusual, but those of the tonsil, while usually diminishing considerably in size, metastasize quickly.

The lip cases show about a 60 per cent. apparent cure rate, the tonsil nil. Interstitial radiation was invariably employed in both lip and tonsil.

In the basal celled group it was noted that the hypertrophic variety was more radio-sensitive than the flat ulcerated type, and gave better results.

Class II.—25 per cent. of all cases of cancer treated, were squamous celled epitheliomata of the cervix uteri, and usually presented themselves for treatment in an advanced stage, falling into group II or III of the League of Nations' Radiological Sub-Commission's definition. The predominant type was of the fungating or cauliflower variety, with free hæmorrhage. Of the 10 cases treated in 1930, 4 were apparently cured at the end of the sixth year, their progress, year by year, can be seen in table S. I, V, VI. Of 11 cases treated in 1931, 6 cases apparently cured at the end of 1935. *Vide* table as above.

These results though depressing regarded as a whole are encouraging individually. Most of them were inoperable, all have been relieved, many given prolongation of life and others have hopes of a cure.

With a further supply of radium we intend to abandon interstitial radiation in this group.

Glass III.—This class, representing 10% of the total, consists of all growths radiated which do not fall into group I and II. They include tumours of the breast, penis, vagina, neck, rectum, bladder, kidney, mediastinum, etc. From the foregoing list it will be realized that treatment in this section would be mostly aimed at palliation and prolongation of life, which was indeed true. Nevertheless we have had a few very satisfactory cases, resulting in apparent cure. Among these may be mentioned a case of epithelioma of the bladder treated in 1932, via a suprapubic incision, a sarcoma (round celled) of the perineum treated interstitially the same year, and an extensive round celled sarcoma of the buttock, also treated interstitially in 1931. These are all alive and well to-day. Such cases give encouragement and we feel sure that with increased experience and improved technique, the results in this group will be better. Amelioration was usually noted in the advanced breast cases, and complete disappearance of the tumour in a case of retroperitoneal sarcoma was obtained by surface radiation, the patient succumbing to lung metastasis 10 months later. General results annually may be seen below. Looking at our results from an histological point of view, the following types have been submitted to treatment:—

Basal-celled epithelioma (rodent ulcer).

Squamous-celled epithelioma.

Melanoma.

Adeno-Carcinoma.

Columnar-celled Carcinoma.

Lympho-Sarcoma.

Round-celled Sarcoma.

Fibro Sarcoma.

Of these we find that the basal celled carcinoma and lympho and round celled sarcomata are the most radio-sensitive, followed by the squamous celled epitheliomata. The adenocarcinomata of the breast come next in sensitivity, followed by the columnar celled growths. The fibro sarcomata are highly radio-resistant and require such large dosage, that damage may be done to the normal tissues, although we have obtained three apparent cures of this condition, viz. of the scalp, alveolus and shoulder.

We are much indebted to Dr. M. Gosden for assisting us in histological diagnosis and in carrying out an investigation on a sequence of sections during the progress of radiation. This latter work enabled us to form some idea of the effect of radium on the malignant cells, from day to day, and is referred to in my Annual Report for 1931.

CONCLUSIONS.

(1) That the employment of Radium for the treatment of certain types of Cancer, in Cyprus, is fully justified in the results here presented.

(2) That such treatment should be carefully controlled and in the hands of a specially trained officer, if the best results are to be obtained and untoward complications and dangers avoided.

(3) That Radium therapy produces the best results in the treatment of the basal celled epitheliomata (rodent ulcer) followed by squamous epithelioma of the lip, and of the uterus, in early cases.

(4) That the histological nature of each tumour is of great importance and must be carefully considered before deciding to use radium as a primary therapeutic agent.

(5) That as regards technique, the methods which have been generally employed, here, are satisfactory, with the exception of that for the uterus. If more radium was available, and in suitable containers, it would be better to follow the Stockholm system and avoid interstitial application.

(6) That there is a definite scope for the combination of surgery and radium, particularly in dealing with growths of the bladder and rectum, and of certain glandular areas. Electro-coagulation, in suitable cases, is also of value.

(7) That if radium therapy is expected to give good results, cases must be carefully selected with the following possibilities in view:—

(a) Probable cure.

(b) Palliation of present condition.

(c) Prolongation of life.

Indiscriminate use of radium is both dangerous and useless.

(8) That the combination of deep X-Ray therapy with radium is both desirable and necessary, particularly in the treatment of glandular areas.

(9) That preliminary biopsy is not always necessary.

(10) That Radium may be usefully employed in some benign conditions.

(11) That the round celled and lympho sarcomata react rapidly to radium, which gives marked relief of symptoms, but metastasis are early and frequent.

TABLES S. I.—COMPARATIVE TABLE.—RADIIUM.

Patients treated in 1935.—Condition December, 1935.

	Number treated A.C.		I.	R.	D.	U.K.	N.I.
Uterus	16	12	1	1	2	..	..
Head	24	15	5	..	2	1	1
Other sites ..	9	5	2	1	1	..	..

Patients treated in 1934.—Condition December, 1935.

Uterus	23	12	1	..	6	4	..
Head	38	27	1	3	5	1	1
Other sites ..	13	5	..	..	7	1	..

Patients treated in 1933.—Condition December, 1935.

Uterus	17	9	1	..	7	..	..
Head	31	17	2	2	6	3	1
Other sites ..	7	2	..	..	4	1	..

Patients treated in 1932.—Condition December, 1935.

Uterus	15	5	..	..	10	..	..
Head	29	21	..	2	5	1	..
Other sites ..	13	4	..	1	8	..	..

Patients treated in 1931.—Condition December, 1935.

Uterus	11	6	..	..	4	1	..
Head	20	14	1	1	2	1	1
Other sites ..	17	5	..	..	10	2	..

Patients treated in 1930.—Condition December, 1935.

Uterus	10	4	..	..	6	..	..
Head	26	15	..	1	10	..	..
Other sites ..	10	..	..	..	10	..	..

A.C. = Apparently cured.

I. = Improved.

R. = Recurrence.

D. = Died.

U.K. = Unknown.

N.I. = Not improved.

TABLES—S. II.

RADIUM TABLES.—GROUP I—1935.

Site	Radium Mg.	Sex	Duration Days	Mg. hours	Result	Remarks
Jaw ..	40	M.	7	6,720	D.	Interstitial & Caste
Cheek ..	9	F.	7	1,512	A.C.	Interstitial
Nose ..	10	F.	10	2,400	A.C.	Caste
Cheek ..	54.5	F.	7	9,156	A.C.	Interstitial & Surface
Jaw ..	1.5	F.	3	108	A.C.	Dental plate
Cheek ..	45	M.	17	9,240	M.I.	Interstitial
						two treatments
L. Lip ..	3	F.	10	720	I.	Interstitial
Lip ..	3	M.	10	720	A.C.	Interstitial
Eyelid ..	3	F.	10	720	I.	Interstitial
L. Lip & Cheek ..	22.5	M.	12	3,060	U.K.	Interstitial
Nose & Cheek ..	4	F.	7	672	A.C.	Interstitial
Tonsil ..	50	F.	7	8,400	D.	Caste
Canthus ..	4	F.	8	768	A.C.	Interstitial
Tonsil ..	9	M.	6	1,296	I.	Interstitial
Cheek ..	4	M.	8	768	A.C.	Interstitial
Chin ..	6	F.	6	864	A.C.	Interstitial
Tonsil ..	40	F.	10	9,600	I.	Neck-Sponge
Nose ..	4	F.	7	672	A.C.	Wax Caste
Temple ..	6	M.	10	1,440	A.C.	Interstitial
Tonsil ..	31	M.	7	5,208	I. Sq.	Interstitial
Jaw ..	22	M.	6	3,168	A.C.	Interstitial
Cheek ..	7.5	M.	7	1,260	A.C.	Caste
Eyelid ..	1	F.	10	240	A.C.	Interstitial & Caste
Nose ..	12	F.	6	1,728	A.C.	Interstitial & Caste

SARCOMA LIST.—1935.

Neck ..	165	F.	19	24,840	A.C.	Caste
Jaw ..	40	M.	7	6,720	D.	Interstitial & Caste
Neck ..	75	F.	7	12,600	R.	Caste
Jaw ..	1.5	F.	3	108	A.C.	Dental plate
Neck ..	24	M.	7	4,032	A.C.	Neck open incision
Jaw ..	22	M.	6	3,168	A.C.	Interstitial

TABLES—S. III.

RADIUM TABLES.—GROUP II—1935.

Site	Radium Mg.	Duration Days	Mg. Hours	Result	Remarks
Cervix ..	55	6	7,920	A.C.	Stage I.
" ..	55	6	7,920	A.C.	Stage I.
" ..	55	6	7,920	A.C.	Stage II.
" ..	55	6	7,920	A.C.	Stage I.
" ..	55	6	7,920	A.C.	Stage II.
" ..	55	6	7,920	D.	Stage II.
" ..	55	6	7,920	R.	Stage III.
" ..	55	6	7,920	A.C.	Stage II.
" ..	55	6	7,920	A.C.	Stage II.
" ..	55	6	7,920	A.C.	Stage I.
" ..	55	6	7,920	D.	Stage II.
" ..	58	6	7,920	A.C.	Stage II.
" ..	55	6	7,920	A.C.	Stage I.
" ..	55	6	7,920	A.C.	Stage I.
" ..	55	6	7,920	N.I.	Stage II.
" ..	55	6	7,920	A.C.	Stage III.

TABLES—S. IV.

RADIUM TABLES.—GROUP III—1935.

Site	Radium Mg.	Sex	Duration Days	Mg. Hours	Result	Remarks
Neck	165	F.	19	24,840	A.C.	Caste
Neck	75	F.	7	12,600	R.	Caste
Hand	10	F.	8	1,920	A.C.	Interstitial
Breast	16	F.	7	2,688	A.C.	Interstitial
Neck	70	M.	12	9,360	A.C.	Caste
Breast	10	F.	10	2,400	I.	Interstitial
Neck	24	M.	7	4,032	A.C.	Neck Open Incision
Penis	45	M.	15	16,200	I.	Rubber Caste
Corpus uteri ..	70	F.	13	12,120	D.	Interstitial

Note.—A.C. = Apparently cured.
 U.K. = Unknown.
 N.I. = Not improved.

D. = Died.
 I. = Improved.

TABLES—S. V. GROWTHS OF THE FACE, LIPS & C.

Y E A R	Number Treated	Alive at the end of						Died of Cancer by end of						Lost Sight of by end of						Survival Rates at the end of					
		1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.	6th yr.	1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.	6th yr.	1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.	6th yr.	1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.	6th yr.
1930	26	25	22	18	17	16	16	1	4	6	8	10	10	—	—	2	1	—	—	% 96	% 85	% 69	% 65	% 62	% 62
1931	20	20	17	18	18	17	—	—	2	2	2	2	—	—	1	—	—	1	—	100	85	90	90	85	—
1932	29	29	24	24	23	—	—	—	2	4	5	—	—	—	3	1	1	—	—	100	83	83	79	—	—
1933	31	24	24	22	—	—	—	4	5	6	—	—	—	3	2	3	—	—	—	77	77	71	—	—	—
1934	38	32	32	—	—	—	—	3	5	—	—	—	—	3	1	—	—	—	—	84	84	—	—	—	—
1935	24	21	—	—	—	—	—	2	—	—	—	—	—	1	—	—	—	—	—	88	—	—	—	—	—

GROWTHS OF OTHER SITES.

1930	10	9	5	4	1	1	—	1	4	6	9	9	10	—	—	1	—	—	—	90	50	40	10	10	—
1931	17	15	10	8	6	5	—	2	5	7	8	10	—	—	—	2	2	3	2	88	59	47	35	29	—
1932	13	13	8	6	5	—	—	—	5	6	8	—	—	—	—	—	1	—	—	100	62	46	38	—	—
1933	7	5	5	2	—	—	—	1	1	4	—	—	—	—	—	1	1	—	—	71	71	29	—	—	—
1934	13	9	5	—	—	—	—	3	7	—	—	—	—	—	—	1	—	—	—	69	38	—	—	—	—
1935	9	8	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	89	—	—	—	—	—

TABLE—I.

RETURN OF SURGICAL OPERATIONS DURING 1935.

	Total	Cured	Relieved	Unrelieved	Died
Abscess	177	169	7	1	—
Amputations	36	30	4	1	1
Appendicectomy	252	249	2	1	—
Benign Tumours	41	40	1	—	—
Cholecystectomy	8	8	—	—	—
Cæsarian Section	5	5	—	—	—
Cystotomy	8	4	1	—	3
Curettage	110	106	2	1	1
Cystoscopy	6	2	1	3	—
Eye	129	115	11	3	—
Empyema (Tapped)	4	3	—	—	1
„ (Resection of Rib)	4	3	—	—	1
Fistula	15	11	4	—	—
Glands (Excision of)	20	19	1	—	—
Gastro-Intestinal operations	10	7	—	—	3
Hernia	215	209	2	—	4
Hydrocele	16	16	—	—	—
Hæmorrhoids	5	5	—	—	—
Hydatid Cyst.	16	13	2	—	1
Hysterectomy	11	11	—	—	—
Intestinal operations	1	1	—	—	—
Laparotomy	38	30	3	1	4
Lemnectomy	1	1	—	—	—
Mastoids	8	7	1	—	—
Malignant Tumours :—					
(a) Breast	4	4	—	—	—
(b) Uterus	24	6	14	3	1
(c) Other sites	43	13	20	7	3
Male Genital Organs	23	19	1	1	2
Miscellaneous	203	171	21	5	6
Minor Operations	101	95	5	1	—
Nephrectomy & Nephrotomy	11	9	2	—	—
Open operations on Fractures and joints	80	60	12	3	5
Open operations on nerves	6	5	1	—	—
Osteomyelitis	14	10	3	—	1
Plastic operations	20	19	1	—	—
Salpingo-oophorectomy	22	20	—	—	2
Sequestrotomy	9	8	1	—	—
Tonsils	38	37	1	—	—
Throat and nose	60	60	—	—	—
Trephining	8	7	—	—	1
Tendon Transplantation	7	6	1	—	—
Tracheotomy	4	2	1	—	—
Thoracotomy	3	3	—	—	—
Hysteropexy	3	2	—	1	—
Ventrofixation	3	3	—	—	—
Total	1,822	1,623	126	32	41

TABLE—II.

	Total cases	Race includ- ing tongue, &c.	Stomach	Liver	Breast	Uterus	Bladder	Penis	Orbit	Colon	Kidney	Other Sites
Males ..	52	30	6	2	1	—	—	3	—	—	1	9
Females ..	119	27	9	2	15	47	1	—	1	1	1	15
Grand Total ..	171	57	15	4	16	47	1	3	1	1	2	24
Average Age :												
Males ..	52.4	55.3	47.3	23.0	4.0	—	—	62.3	—	—	32.0	57.0
Females ..	49.0	53.0	50.5	47.5	43.0	48.7	60.0	—	4.0	30.0	60.0	51.2
RACE :												
MOSLEMS :												
Males ..	7	4	1	1	—	—	—	—	—	—	—	1
Females ..	21	6	2	—	3	6	—	—	—	—	—	4
NON-MOSLEMS :												
Males ..	45	26	5	1	1	—	—	3	—	—	1	8
Females ..	98	21	7	2	12	41	1	—	1	1	1	11
TYPE :												
CARCINOMA :												
Males ..	20	6	6	1	—	—	—	3	—	—	—	4
Females ..	84	5	9	1	14	45	—	—	—	1	—	9
SARCOMA :												
Males ..	8	2	—	1	1	—	—	—	—	—	1	3
Females ..	9	1	—	1	1	1	—	—	1	—	1	3
RODENT ULCER :												
Males ..	14	12	—	—	—	—	—	—	—	—	—	2
Females ..	13	13	—	—	—	—	—	—	—	—	—	—
EPITHELIOMA :												
Males ..	11	10	—	—	—	—	—	—	—	—	—	1
Females ..	12	8	—	—	—	1	1	—	—	—	—	2

APPENDIX B.**REPORT OF THE GOVERNMENT BACTERIOLOGIST FOR 1935.**

BY MINNIE GOSDEN, M.B., B.S. (Lond.), D.T.M. & H. (Edin.),

Government Bacteriologist.

1935 marks the completion of the seventh year's work since the opening of the Bacteriological Laboratory, as distinct from the Analytical Laboratory, following the appointment of a Bacteriologist in 1929. During this time the laboratory has been gradually equipped and developed to carry out the pathological, bacteriological and biochemical investigations required by the Medical Department for diagnosis of disease, public health work and forensic purposes.

A comparison of the number of specimens examined each year shows that there has been a gradual increase in its work. The examinations performed during 1935 are shown in detail in Table B, which shows that the work is of a very varied nature.

The following figures show the specimens received each year since 1929:—

1929	(from March)	5,163	1933	..	..	..	9,795
1930	..	..	9,616	1934	..	..	9,833
1931	..	..	9,612	1935	..	..	10,423
1932	..	..	11,540				

The staff of the laboratory consists of:—

- 1 Bacteriologist,
- 1 Laboratory assistant,
- 1 Clerk (part time),
- 1 Attendant and cleaner.

The subordinate staff has been trained to carry out many of the routine investigations, make media, do sterilizing, etc., and are now quite efficient in their work.

I would like to express appreciation of the keenness, loyalty and co-operation of the staff, without this the development of the work of the laboratory and its maintenance in its present form would have been quite impossible.

From 16th May to 18th September, 1935, I was on leave in England, during which time Dr. Phillips, the District Medical Officer, acted as Bacteriologist.

The senders of specimens to the laboratory are shown in Table B, I. From this it will be seen that the main senders of specimens are Medical Officers attached to Nicosia Hospital (1,772), the V.D. Clinics (5,316), Limassol (194), Larnaca (125), and Kyrenia (142). Private practitioners sent 622 specimens. During the year a revision of the fees charged for laboratory examinations was carried out. All examinations for diseases of danger to the public health being now carried out free of charge for all doctors, while fees have been modified for other examinations.

A comparison of specimens sent by private practitioners in different years show that they are making increasing use of the service provided by the laboratory.

Specimens Sent by Private Practitioners.

1929	..	..	..	140	1933	..	..	..	367
1930	..	..	..	140	1934	..	..	..	446
1931	..	..	..	284	1935	..	..	..	622
1932	..	..	..	523					

REVENUE.

The total value of the work performed for Government Medical Officers, institutions and private practitioners calculated on the revised Government scale of charges was £3,824. 3s.

Fees to the amount of £77. 7s. were collected and paid into the Treasury.

In addition the T.A.B. vaccine made in the laboratory and used in the Island would have cost £251, if imported from other sources.

ROUTINE INVESTIGATIONS.

SUMMARY OF PRINCIPAL FINDINGS, WHICH ARE SHOWN IN DETAIL IN

TABLE B. II.

Blood Films.

525 films were examined for malaria, *P. falciparum* was found in 138 and *P. vivax* in 51. These films were mainly sent to exclude malaria in patients admitted to Hospital with fever, and also to check treatment in cases treated during the year with atebirin. Films are not sent to the laboratory as a routine from all cases of malaria, or from untreated cases, the figures do not indicate the prevalence of the disease in the Island.

Counts.

88 blood counts were carried out; anæmia of a macrocytic type was found in 6 cases, 5 in pregnancy. Further investigations should be carried out into the prevalence and type of anæmia occurring in the Island among pregnant women. The cases seen in the Hospital are of a severe type. There are no records to show the prevalence of milder degrees of anæmia, as the patients are only seen when they are ill enough to attend the Hospitals.

Cultures.

Of 18 blood cultures *B. coli* was grown from one. Cases of typhoid in the Island are rarely seen in Hospital early enough to make blood culture a useful means of diagnosis.

Biochemical.

18 estimations of blood urea and 13 of blood sugar were carried out. The Formal gel reaction for Kala-azar was carried out on 3 specimens and gave definite jellification and immediate opacity on one serum. This test was repeated and controlled with several sera received for Wassermann Reaction and there is no doubt that it was positive. The patient was a young boy with splenic enlargement, and temperature of long duration. Anti-malarial drugs had no effect on the temperature which, however, fell to normal, while the spleen diminished rapidly in size, after a few injections of antimony. Cases of Kala-azar have not been confirmed here. Spleen smears and smears from the bone marrow were not available until after antimony treatment had been started, and Leishman Donovan bodies were not found. The formal gel test was negative a fortnight after the return of the temperature to normal. In view of the suspicion that this was really a case of Kala-azar and not chronic malaria, careful and complete examinations of more children with splenomegaly and temperature should be carried out before treatment.

Complement Fixation Tests.

4,298 blood sera were examined by Wassermann Reaction, 4,107 from the V.D. Clinics, the results of which are shown in Table B. III. Of the total 791 gave strongly positive and 120 weakly positive reactions. The method used continually in the laboratory has been that of McIntosh and Fildes. At the end of the year the Kahn test was performed on sera received for examina-

tion, with a view to deciding whether to substitute it for the Wassermann Reaction as a routine here. It will be tried for at least 6 months before this is decided.

9 sera were tested for complement fixation with hydatid fluid, with 2 positive results.

Agglutination Tests.

621 sera were examined for agglutinins. Positive results were obtained with the following organisms: *B. typhosus* 232, *B. paratyphosus* A 27, *B. paratyphosus* B. 14. All sera were tested as a routine against *Br. melitensis*, but none agglutinated this organism.

Grouping.

20 donors were grouped for blood transfusions. While on leave in England sera from group 2 and 3 donors was obtained and at the end of the year it was possible to determine the groups of recipients and donors, in addition to testing their bloods directly. Now that these sera are available, it should be possible to prepare a list of suitable and ready tested donors for use in emergencies, when valuable time is so often wasted in testing donors.

Pathological Fluids, Pus, etc.

Of 29 specimens of pus from abscesses 10 grew *staphylococcus aureus*, 5 streptococci, 1 pneumococci, 1 *B. pyocyaneus* and 2 *B. coli*. Tubercle bacilli were found twice.

23 Cerebro-Spinal-Fluids were examined, 2 grew pneumococci and one streptococci in culture. No meningococci were found during the year.

18 specimens from pleural effusions showed the tubercle bacilli in films from centrifuged deposit in 3.

4 specimens were examined for Leishman Donovan bodies, the spleen and bone marrow smears were from the patient mentioned under the formal gel reaction.

Urethral and Cervical Smears.

1,228 smears from urethra and cervix, etc., in male and female patients were examined for gonococci, which were found in 486. 1,207 of these smears were from patients attending the V.D. Clinics, the results from which are shown in detail in Table B. III.

Pharyngeal Swabs.

204 throat swabs were examined. 14 grew organisms morphologically Klebs-Löffler bacilli. Streptococci were found in 9, several cases of severe membranous angina caused by streptococci occurred during the later months of the year.

Sputum.

The examination of 492 sputums mainly for the presence of tubercle bacilli showed the bacillus in 127. Pneumococci were grown from 3, one proved to be group II.

Examinations for Leprosy.

227 nasal scrapings and skin clips for leprosy bacilli were examined, leprosy bacilli were found in 72. More results were positive in nasal scrapings than in skin clips. Most of these examinations were from patients in the leper colony, or on parole, to check treatment, and do not indicate new cases.

Fæces.

68 specimens of fæces were examined microscopically and by culture. *Entamœbæ histolytica* was found once. The dysentery bacilli isolated were culturally mannite fermentors, but did not agglutinate with any stock sera. Comparatively few fæces are sent for examination.

Urines.

729 urines were sent for examination, many contained albumen, sugar, or pus and blood, 1 hæmoglobin, and 4 grew *B. coli* on culture. Urine is only sent to the laboratory after preliminary testing by the Hospital staff, or if some abnormality is suspected.

Pathological Examinations.

68 specimens of tissue, etc., were sent for histological examination or as specimens for the museum, which contains now many interesting specimens. Details of the specimens are shown in Table B. II. These examinations were not carried out during the absence of the Bacteriologist on leave and the numbers are smaller than last year. The numbers of specimens of carcinoma received have naturally diminished since many are now treated by radium instead of by surgical removal. 13 post-mortem examinations were performed by the Bacteriologist, the cause of death in each case being shown in Table B. II. During the year a new mortuary, consisting of a well lighted and equipped post-mortem room and two mortuaries adjoining, has been built in Nicosia Hospital grounds which greatly facilitates the proper performance of these examinations. Whenever reasonably possible, it is desirable in the interest of justice that in criminal cases bodies should be removed to the mortuary before examination, it is difficult for any medical officer to carry out careful and complete examination in other surroundings. 2 cases of general peritonitis showed clear sign in the cervix of injury due by the passage of some instrument, both had incomplete abortions and were admitted to Hospital moribund with placental remains gangrenous. 2 cases of septicæmia following recent delivery were very septic and were suspicious of interference, although no definite marks were found.

Public Health Specimens.

1,320 spleen smears from rats were examined for *B. pestis*. No bacilli were found during the year. Fleas were collected in 264 batches containing 1,641 fleas. Table B. V. shows the fleas found in different districts. The predominant flea found in Larnaca and Limassol was *Xenopsylla cheopis*, and in Famagusta, Kyrenia and Paphos *Leptopsylla musculi*, *Ctenocephalus* and *Ceratophylus fasciata* were found occasionally.

92 samples of drinking water were examined, with the results shown in Table VI. Samples of water were received from several ice factories, and 2 samples of ice were examined; the results were very unsatisfactory for ice if used in food.

Various.

5,020 cc. of T.A.B. vaccine were prepared. Also 5 autogenous staphylococcal vaccines.

1 shoe was sent by the Police covered with damp material thought to be human tissue, this proved to be vegetable material.

Publications.

Acute Intussusception in an adult, by C. H. Cuff and M. Gosden, *Brit. Journ. of Surg.*, XXII, No. 87, 1935.

Tetanus Following Circumcision, by M. Gosden, *Trans. Roy. Soc. Trop. Med. and Hyg.*, XXVIII, 6, p. 645-648, April, 1935.

TABLE B-1.—SENDERS OF SPECIMENS.

Senders	Blood.					Pathological Fluids, Pus, Excreta, etc.					P. H. Specimens					Various					Totals										
	Films	Counts	Cultures	Biochemical	Grouping	Wassermann Reaction	Weinberg Reaction	Agglutination	Urethral and cervical smears	Fluids, pus, etc.	Sputum	Pharyngeal swabs	Examinations for leprosy	Urine	Feces	Tissues & Muscles	Post-mortems	Rats	Flies (rat)	Drinking waters		Culture from pus (rat)	Abcess (rat)	Ice	Vaccines	Calcoli	Condensed milk	Police specimens	Veterinary		
Surgical Specialist ..	7	23	1	2	9	6	4	47	3	9	1	6	—	27	1	32	1	—	—	—	—	—	—	—	—	—	—	—	131		
Consulting Physician	83	21	—	—	—	7	3	47	—	12	14	3	—	48	11	—	3	—	—	—	—	—	—	—	—	—	—	—	259		
Con. Surgeon, L'sol.	1	—	—	—	—	—	—	—	—	—	4	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8		
Hon. Physician, San.	—	—	—	—	—	20	—	—	—	1	32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	53		
D.M.O., Nicosia ..	11	12	1	—	—	7	—	8	2	10	14	17	—	8	—	8	3	—	—	—	—	—	—	—	—	—	—	—	107		
D.M.O., Limassol ..	28	5	—	—	—	36	—	62	1	7	25	13	—	5	—	6	3	—	—	—	—	—	—	—	—	—	—	—	194		
D.M.O., Famagusta	4	—	—	—	—	32	—	11	—	2	5	9	—	1	—	4	—	—	—	—	—	—	—	—	—	—	—	—	41		
M.O., Troodos ..	3	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6		
H.O., Nicosia ..	148	11	—	5	—	48	2	150	8	19	201	52	27	589	13	—	—	—	—	—	—	—	—	—	—	—	—	—	23		
M.O., Nicosia ..	10	1	—	—	—	1	—	32	3	6	42	20	—	1	5	—	—	—	—	—	—	—	—	—	—	—	—	—	1,275		
M.O., Larnaca ..	108	3	—	1	—	4	—	13	—	2	5	1	—	4	—	1	—	—	—	—	—	—	—	—	—	—	—	—	125		
M.O., Kyrenia ..	—	—	—	—	—	—	—	34	—	1	17	5	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	142		
M.O., Paphos ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	61		
M.O., Polis ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2		
M.O., Lefkoniko ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2		
Med. Officer, Kellaki	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2		
Med. Officer, Vattli	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5		
M.O., Kirou ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5		
Med. Officer, Paklina	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12		
M.O., P. Panayia ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4		
M.O., Kophinou ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2		
M.O., Troops ..	—	—	—	—	—	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4		
D.S., Morphou ..	—	—	—	—	—	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22		
D.S., Yialousa ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15		
D.S., Pedhoulas ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10		
D.S., Lefka ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6		
D.S., Myrtou ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2		
D.S., Perapedhi ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3		
D.S., Agros ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3		
D.S., Laphios ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3		
D.S., Nisou ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1		
D.S., Trikomo ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10		
Govt. Bacteriologist	1	—	—	7	11	9	—	2	1	2	—	2	200	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	
Govt. Analyst ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	252		
Veterinary Officers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	
Police ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	6	
Insp. of Water S'lies,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	3	
Curator, Museum ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	3	
Coroner ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
Police Surgeon, N'sia.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
Hon. Oculist, Nicosia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Hon. Oculist, L'sol.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Tr. Oculist, Nicosia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	3
Tr. Oculist, F'gusta.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Priv. Practitioners	118	8	9	17	—	26	—	227	4	5	113	30	—	25	27	10	1	1,320	264	86	1	1	—	—	—	—	—	—	—	622	622
Sanitary Inspectors	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,676	1,676
V.D. Clinics ..	—	—	—	—	—	4,107	—	—	1,207	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5,316	5,316
Totals ..	525	88	18	36	20	4,298	9	621	1,230	81	492	204	227	729	68	67	13	1,320	264	92	1	1	2	8	1	1	1	6	10,423	10,423	

TABLE B—II.

EXAMINATIONS PERFORMED AND POSITIVE FINDINGS.

<i>Examinations performed</i>	<i>No.</i>	<i>Principal Positive Findings.</i>	<i>No.</i>
<i>Blood :</i>			
Films	525	<i>P. vivax</i>	51
		Gametocytes	14
		<i>P. falciparum</i>	138
		Gametocytes	24
Counts.. .. .	88	Macrocytic anæmia	6
		Secondary anæmia, low colour index	16
		Leucocytosis	16
		Leucopenia	2
		Lymphocytosis	2
		Eosinophilia	1
		Myeloid leukæmia	1
Culture	18	<i>B. coli</i>	1
<i>Biochemical :</i>			
Urea	18	High results	9
		Normal	9
Sugar	13	High result	1
		Glucose tolerance test	1
Uric acid	2		
Formal Gel test for Kala-azar ..	3	Positive	1
<i>Serum Reactions :</i>			
Complement fixation (Wassermann)	4,298	Wassermann Reaction positive	791
		Wassermann Reaction doubtful	120
" " (Weinberg) ..	9	Weinberg Reaction positive	2
Agglutination.. .. .	621	<i>B. typhosus</i>	232
		<i>B. paratyphosus A</i>	27
		<i>B. paratyphosus B</i>	14
Grouping	20	Group 2	2
		Group 3	1
		Group 4	3
<i>Pathological fluids, pus, etc. :</i>			
Pus	29	<i>Staphylococcus Aureus</i>	10
		<i>Streptococci</i>	5
		<i>Pneumococci</i>	1
		<i>B. pyocyaneus</i>	1
		<i>B. coli</i>	2
		Tubercle bacilli	1
Cerebro-Spinal Fluids	23	Increase in cells, lymphocytes	5
		Increase in cells, leucocytes.. .. .	1
		<i>Pneumococci</i>	2
		<i>Streptococci</i>	1
Pleural Effusions	18	Cells lymphocytes	10
		Cells leucocytes	2
		Blood	1
		Tubercle bacilli	3
		<i>B. coli</i>	1
Other Fluids	4	Pus	1
		Bile	1
		<i>B. coli</i>	1
Culture (spleen P.M.)	2		
Spleen Smears } For Leishman	2		
Bone Marrow } Donovan	1		
Ulcer of Leg } Bodies	1		
Urethral and cervical smears ..	1,228	Gonococci present	486
Serum for spirochaetes	3		
Pharyngeal swabs	204	Klebs-Löffler bacilli	14
		<i>Streptococci</i>	19
		<i>Staphylococci</i>	1
Sputum	492	<i>B. tuberculosis</i>	127
		<i>Pneumococci</i>	3
<i>Examinations for Leprosy :</i>			
Nasal scrapings	115	<i>B. lepræ</i>	40
Skin scrapings	112	<i>B. lepræ</i>	32
Fæces	68	<i>Entamœbæ histolytica</i> (free forms)	1
		Pus and blood	4
		" Paradyseutery bacilli "	1
		<i>Tænia ova</i>	1
		<i>Entamœbæ coli</i> cysts	1

<i>Examinations performed.</i>	<i>No.</i>	<i>Principal Positive Findings.</i>	<i>No.</i>
<i>Pathological fluids, pus, etc.—continued.</i>			
Urine	729	Albumen present	40
		Amount estimated	24
		Sugar present	30
		Amount estimated	28
		Estimation of urea	3
		Acetone	9
		Bile	2
		Pus	138
		Blood	46
		Casts	10
		Hæmoglobin	1
		Oxalates	111
		B. coli	4
		B. tuberculosis:	1
<i>Pathological Examinations:</i>			
Histological examinations and specimens for museum	68	<i>Inflammations:</i>	
		<i>Pyogenic:</i>	
		Abscess, breast	1
		epididymis	2
		Ulcer, cervix	2
		Ulcer, rectum	1
		Epididymis (chronic)	2
		Appendix (chronic)	1
		Broncho-pneumonia	1
		Granulation tissue	2
		<i>Tubercular:</i>	
		Lymphatic glands	3
		Epididymis	1
		<i>Tumours:</i>	
		<i>Non-malignant:</i>	
		Adenoma, breast	1
		Lipoma	3
		Fibromyoma, uterus	2
		Papilloma, skin	1
		Osteoma cancellous	1
		Leutein cyst	1
		Chronic mastitis	1
		Hypertrophy of breast (male)	1
		<i>Malignant:</i>	
		<i>Carcinoma:</i>	
		Breast schirrous	1
		Pagets disease	1
		<i>Uterus</i>	
		Cervix squamous celled	4
		Endocervical	1
		Body	1
		Secondary, mesentery	1
		Skin, squamous celled	3
		Lip, squamous celled	1
		Penis	2
		<i>Sarcoma</i>	
		<i>Uterus</i>	
		Spindle celled diffuse	1
		Arising in fibroid	1
		Fibrosarcoma	2
		Periosteal	1
		Myelogenous	2
		Liver	1
		Kidney	1
		Glioma eye	1
		<i>Products of conception:</i>	
		Ruptured ectopic, cornu of uterus	1
		Hydatidiform mole	1
		<i>Various:</i>	
		Fibrosis of uterus	1
		Ruptured semilunar cartilage	1
		Hydatid cyst, inguinal canal	1
		General peritonitis, Instrumental abortion	2
		Septicæmia	
		Recent delivery	2
		Dysentery	
		Recent delivery	1
		Malignant endocarditis	1
Post-mortem examinations	13		

Examinations performed.	No.	Principal Positive Findings.	No.
<i>Pathological Examinations—cont.:</i>			
<i>Post-mortem examinations.—cont.</i>			
		Laryngeal diphtheria	1
		Broncho-pneumonia	1
		Gangrene of lung	1
		Unresolved pneumonia	1
		Tetanus	1
		Multiple stab wounds (homicidal)	2
		Gunshot wound of head (suicidal)	1
<i>Public Health Specimens :</i>			
Spleen smears (rat)	1,320	Batches. See separate Table.	
Rat fleas	264		
Cultures from abscesses in rats	2	See separate Table.	
Drinking waters	92		
Ice	2	Organisms in agar at 37° C. 40 in 1cc.	1
		Typical and & atypical B. coli from 5cc.	1
		Organisms in agar at 37° C. 290 in 1cc.	1
		Typical B. coli isolated from 0.1cc.	1
<i>Various :</i>			
Vaccines	8	T.A.B. batches, total 5,020cc. ..	3
		Autogenous staphylococci	5
Veterinary	5	Teratoma (cock)	1
		Material vomited by cow fibrin and leucocytes	1
Renal calculus	1	Uric acid and ammonium urate ..	1
Shoe (Police Case)	1	Vegetable debris	1
Condensed milk	1	Organisms in agar at 37° C. 100,000 in 1cc.	1
		B. coli test negative in 20cc.	1
TOTAL	10,423		

TABLE B.—III.
RESULTS OF EXAMINATIONS OF SPECIMENS FROM VENEREAL DISEASES CLINICS.

District	Wasser- mann Reaction Blood	Useless	Number Positive	Weakly Positive	% Positive	Smears	Gonococci found	% Positive
Nicosia	1,905	41	383	53	20.0	497	149	30.0
Limassol	600	9	130	21	22.0	44	19	43.0
Larnaca	652	12	109	13	17.0	275	110	40.0
Famagusta	646	35	83	14	13.0	234	140	60.0
Paphos	304	39	65	10	24.0	157	66	42.0
Totals	4,107	136	770	111	19.0	1,207	484	40.0

TABLE B.—IV.
EXAMINATION OF RATS.

District	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Limassol	13	35	29	41	26	20	16	22	34	39	38	25	338
Larnaca	23	15	18	23	24	29	29	32	29	28	30	27	307
Famagusta	74	48	31	26	21	23	32	27	22	18	24	20	366
Kyrenia	12	38	38	15	16	15	12	7	—	15	33	14	215
Paphos	—	—	—	—	2	2	4	—	5	12	30	20	75
Nicosia	2	10	1	3	3	—	—	—	—	—	—	—	19
Totals	124	146	117	108	92	89	93	88	90	112	155	106	1,320

TABLE V.
RAT FLEAS.

District	Xenopsylla Cheopis	Leptopsylla Musculi	Ceratophylus	Ctenocephalus	Totals
Limassol	163	68	1	1	233
Larnaca	632	65	—	4	701
Famagusta	30	92	—	—	122
Kyrenia	53	238	—	—	291
Paphos	18	263	1	—	282
Nicosia	12	—	—	—	12
Totals	908	726	2	5	1,641

TABLE B.—VI.
RESULTS OF WATER EXAMINATIONS.

Name of Source	Date	Nature	Organisms in agar at 37° C. in 1cc.	Typical B. coli in cc.	Atypical B. coli in cc.
<i>Limassol Town Water Supply</i> :—					
		Chain of wells piped into town			
Ayia Erini water, etc. Dja- moua quarter	4.2.35 ..	—	60	—	.. +20cc.
Kleopatra Street	4.2.35 ..	—	20	.. +10	.. +10cc.
Pumping Station	— ..	—	20	.. +20	.. —
Fountain Georgiou A. Street	2.5.35 ..	—	140	—	.. +1cc.
Bello Yiannos coffee shop	2.5.35 ..	—	40	—	.. +5cc.
Water tower	2.5.35 ..	—	90	—	.. +10cc.
Ayia Zoni church	2.5.35 ..	—	120	—	.. +1cc.
Chiflikoudia road	— ..	—	20	—	.. +10cc.
Pumping Station	1.7.35 ..	—	50	—	.. +10cc.
Customs Office	1.7.35 ..	—	90	—	.. +0.1cc.
P.W.D. yard	1.7.35 ..	—	350	—	.. +20cc.
Ayia Antoni Street	1.7.35 ..	—	30	—	.. +1cc.
Pumping Station	2.9.35 ..	—	nil in 0.1cc.	.. —20cc.	.. —20cc.
Navarina Street	2.9.35 ..	—	920	—	.. —20cc.
District Hospital	3.9.35 ..	—	nil in 0.1cc.	.. —20cc.	.. —20cc.
Customs Office	3.9.35 ..	—	30	.. —20cc.	.. —20cc.
Ellados Street	18.11.35 ..	—	70	.. +10cc.	.. —
Afrodite Street	18.11.35 ..	—	100	.. +0.1cc.	.. —
Pavlou Mela Street	18.11.35 ..	—	50	.. +1cc.	.. —
Karaiskaki Street	18.11.35 ..	—	220	.. +5cc.	.. —
Polemidhia Camp	16.12.35 ..	—	20	—	.. +5cc.
Pumping Station	16.12.35 ..	—	20	—	.. +5cc.
Navarinou Street	16.12.35 ..	—	20	—	.. +10cc.
Well for ice making, Oasis locality	27.5.35 ..	Well 44 ft. deep- wooden cover	1,500	.. +0.1cc.	.. —
Ali Riza well	27.5.35 ..	Well	20	—	.. +1cc.
<i>Paphos Water Supply</i> :					
New supply Dashoudi spring	24.6.35 ..	Spring	20	—	.. +1cc.
Ay. Nicola Meletse spring	24.6.35 ..	Spring	.. nil in 0.1cc.	.. —20cc.	.. —20cc.
Kato Paphos, spring water	18.11.35 ..	Spring, stores in .. tank	40	.. +1cc.	.. —
<i>Famagusta Water Supply</i> :					
Varosha, Stavro locality ..	9.8.35 ..	Well	180	.. —20cc.	.. —20cc.
Ayia Zoni locality	9.8.35 ..	Well	nil	.. —20cc.	.. —20cc.
Hemiartesian well	9.8.35 ..	Well	90	.. +10cc.	.. —
<i>Larnaca Water Supply</i> :					
Pasha Chiftlik, main channel	4.4.35 ..	Chain of wells, not piped	90	.. +5cc.	.. +5cc.
Kamares water	22.6.35 ..	—	20	—	.. +1cc.
Chrisopolitissa water	22.6.35 ..	—	10	.. +0.1cc.	.. —
Pasha Chiftlik	22.6.35 ..	—	10	.. +1cc.	.. —
Kouppi locality	22.6.35 ..	—	40	.. +5cc.	.. —
<i>Ay. Dhometios Village Water Supply</i> :					
Ali Bey locality	24.4.35 ..	Chain of wells piped to village	20	.. +20cc.	.. —
do.	23.6.35 ..	—	.. nil in 0.1cc.	.. —20cc.	.. —20cc.
do.	5.11.35 ..	—	.. uncountable	.. +1cc.	.. —
do.	9.12.35 ..	—	.. nil in 0.1cc.	.. —20cc.	.. —20cc.
New bore hole on Troödos					
Road	12.8.35 ..	Fresh bore for water	560	.. +1cc.	.. —
do.	20.8.35 ..	—	10	.. +1cc.	.. —
do.	29.8.35 ..	—	.. nil in 0.1cc.	.. —20cc.	.. —
<i>Linou Village Water Supply</i> :					
Livadhia, Mahamoudi water	24.10.35 ..	—	10	.. +1cc.	.. —
Mahamoudi spring	12.12.35 ..	Spring	.. nil in 0.1cc.	.. —20cc.	.. —20cc.
do.	12.12.35 ..	Spring	30	—	.. +5cc.
Platani village, Vournes spring	14.1.35 ..	Spring in rock	40	.. —20	.. —20
Kato Dhrys, piped supply					
Tap 1	22.1.35 ..	Piped into village	.. nil in 0.1cc.	.. —20	.. —20
Kato Dhrys, Piped supply					
Tap 2	22.1.35 ..	—	130	.. —20	.. —20
Larnaka tis Lapithou	19.2.35 ..	Spring in rock piped to village	90	.. —20	.. —20

Name of Source	Date	Nature	Organisms in agar at 37° C. in 1cc.	Typical B. coli in cc.	Atypical B. coli in cc.
Ay. Ioanni, Paphos, Loutfi Mehmed well	4.4.35 ..	Well	350	+1cc.	—
Ay. Ioanni, Paphos, Kato Vrisi	4.4.35 ..	Well	20	+5cc.	+5cc.
Ay. Ioanni, Paphos, Pano Vrisi	4.4.35 ..	Well	40	+5cc.	—
Tap water in Leper Farm	18.4.35 ..	Chain of wells, some damaged	uncountable in 0.1cc.	—	+5cc.
Makrasyka, Ay. Efstathios	22.5.35 ..	Shallow well	80	+1cc.	—
Lysi, Lakkos tou Kirlappi Kokkines	27.5.35 ..	Well	140	+5cc.	—
Lysi, Kokkines Artemou ..	27.5.35 ..	Well	430	+1cc.	—
Lysi, Lakkos tou Roussou Kokkines	27.5.35 ..	Well	160	+1cc.	—
Government Analyst's house	31.5.35 ..	Tap	460	+1cc.	—
Athalassa Stock Farm ..	19.6.35 ..	Chain of wells	40	+5cc.	—
Athalassa Irrigation water	19.6.35 ..	—	20	+10cc.	—
Ipsona village, Church well	1.7.35 ..	Well not protected	10	+1cc.	—
Ipsona village, well of Christofi	1.7.35 ..	Well	80	+0.1cc.	—
Kyrenia, Anastassia Angeli well	11.7.35 ..	Well	60	+1cc.	—
Agridhaki village well ..	11.7.35 ..	Well	10	+20cc.	+20cc.
Agridhaki village spring water	11.7.35 ..	Spring	90	+5cc.	—
Galata village, Piki spring	19.7.35 ..	Spring	130	+5cc.	—
Ermou Street well, Nicosia, Ice Factory	20.7.35 ..	Well	5,070	+0.1cc.	—
Nicosia town supply, Kyrenia Gate, used in ice factory	26.7.35 ..	Chain of wells	20	+10cc.	—
Xylotymbou well No. 1 ..	29.7.35 ..	Well	110	+0.1cc.	—
Xylotymbou well No. 2 ..	29.7.35 ..	Well	140	—	+0.1cc.
Ayios Amvrosios, Halcos source	30.7.35 ..	Spring	80	+20cc.	—
Well in Ouranios Ice Factory	3.8.35 ..	Well	40	+5cc.	+5cc.
Eylenja, storage tank ..	9.8.35 ..	Chain of wells	50	+1cc.	—
Ice factory, Televanto supply	21.8.35 ..	—	290	+0.1cc.	—
Museum well, Nicosia ..	23.8.35 ..	Well	80	+0.1cc.	—
Ephtakomi, Boullos spring	6.9.35 ..	Spring	30	+20cc.	—
Ephtakomi, well Yerolakko locality	6.9.35 ..	Well	80	+20cc.	—
Pano Lefkara, Pighi spring	10.9.35 ..	Spring	nil.	—20cc.	—20cc.
Pano Lefkara, Municipality well	10.9.35 ..	Well	nil.	—20cc.	—20cc.
Mesapotamos water, sample from tank on a motor car	23.9.35 ..	Spring, sold in tanks	60	—20cc.	—20cc.
Phassouri Farm water supply	23.9.35 ..	Chain of wells	170	+0.1cc.	—
New Government House Supply	26.9.35 ..	Well	30	+1cc.	—
Ay. Nicola, Lefka	30.9.35 ..	Spring	1,010	+0.1cc.	—
Lythrodhonda, Kamara ..	18.10.35 ..	Chain of wells	10	—	+1cc.
Kologoshi, Bernera source	18.10.35 ..	Chain of wells	30	—	+1cc.
New Government House Supply	19.10.35 ..	Well	40	+5cc.	+1cc.
Askas, Pano Ambellia ..	31.10.35 ..	—	10	+5cc.	—
Lagoudhera, Arghaki tou Exokhorion	1.11.35 ..	Well	nil.	+10cc.	—
Ay. Nicola, Koskina spring	4.11.35 ..	Spring	nil.	—20cc.	—20cc.
Kochina village supply ..	7.11.35 ..	Shallow well	uncountable in 0.1cc.	+1cc.	—
Kochina village supply Kaiserli locality ..	8.11.35 ..	Well	90	+5cc.	+5cc.
Phini, fountain in the village	12.11.35 ..	Spring, pipes to village (broken)	uncountable in 0.1cc.	+10cc.	—

APPENDIX C.

ANNUAL REPORT UPON THE WORK OF THE GOVERNMENT
LABORATORY FOR THE YEAR 1935.

BY STANLEY G. WILLIMOTT, PH.D. (CANTAB.), B.Sc., PH.D. (LIV.), A.I.C.,
Government Analyst.

The year 1935, which saw the continuance of the more normal conditions following the lean years of the depression, was a year of progress and consolidation in the Government Laboratory. The total number of samples showed a decrease of 9.8 per cent. and it would seem that, with the exception of unforeseen contingencies, a total of approximately 2,000 samples covers the normal official services of the laboratory. The Government Analyst was on leave in England from 29th August onwards during which time the Assistant Analyst, Mr. L. C. Haralambides, acted. From 1st June to 29th August the Government Analyst acted as Agricultural Chemist in charge of the Agricultural Laboratory. There were no promotions or changes of staff during the year.

The total number of samples analysed was 2,062 as compared with 2,255 in 1934 taking into account analytical samples only. The total analyses for 1935 and those of the previous decade are compared in Table I.

TABLE I (G.A.).—TOTAL ANALYSES MADE DURING THE LAST DECADE.

Year	Total	Year	Total
1925.. ..	1,834	1931	1,812
1926.. ..	1,999	1932	2,428
1927.. ..	1,850	1933	2,342
1928.. ..	4,805*	1934	2,255
1929.. ..	1,713†	1935	2,062
1930.. ..	1,546		

* Includes 3,344 pathological specimens.

† Includes 678 pathological specimens.

The total for 1935 may be divided into official and non-official samples and classified under the different headings shown in Tables II and III.

TABLE II (G.A.).
OFFICIAL SAMPLES.

Food and Drugs	1,310
Criminal	114
Waters	47
Agricultural and Industrial..	90
Customs and Excise	14
Research	44
Dangerous Drugs	7
Biochemical	4
Miscellaneous.. ..	421
Total	2,051

TABLE III (G.A.).
NON-OFFICIAL SAMPLES.

Animal Viscera	8
Gypsum	2
Water	1
Total.. ..	11
Total Table II	2,051
GRAND TOTAL	2,062

The samples falling under the different headings are considered in some detail in the following sections:—

1. FOOD AND DRUGS.

The Island is divided into seven districts for the purpose of the administration of the Food and Drugs Law. Data showing the total samples analysed and the number and percentage found adulterated within each of these districts, are summarized in Table IV.

TABLE IV (G.A.).—ADULTERATION BY DISTRICTS.

District	Samples analysed	Genuine	Adulterated	% Adulterated
Nicosia.. ..	159	148	11	6.9
Famagusta ..	257	246	11	4.2
Larnaca	147	142	5	3.4
Limassol	441	431	10	2.2
Paphos	152	141	11	7.2
Polis	40	40	—	—
Kyrenia	114	114	—	—
Total	1,310	1,262	48	3.6

Adulteration was highest in Nicosia and Paphos Districts and it is probable that the adulteration rates found would have been still higher had a greater number of official samples been taken. In the Districts of Kyrenia and Polis adulteration was apparently non-existent. The general adulteration rate of 3.6 per cent. showed a marked decline on that of 1934 (23.9 per cent.). It is believed to be only partly accounted for by any real drop in the amount of adulteration and principally by the fact that no special surveys and inspections were made by the sanitary staff of suspected stocks or old supplies of canned foods.

Table V gives the total number of each kind of foodstuff or drug examined for the whole Colony, with the proportion of samples adulterated.

TABLE V (G.A.).—FOOD AND DRUGS ANALYSED WITH PER CENT. ADULTERATION

Sample	Number	Adulterated	% Adulterated
Flour	1115	2	1.7
Bread	46	nil	nil
Biscuits	9	nil	nil
Coffee	200	25	12.5
Rice	2	nil	nil
Tea	56	nil	nil
Milk	26	1	3.8
Condensed milk	26	1	3.8
Olive oil	94	19	20.2
Vinegar	20	nil	nil
Butter	109	nil	nil
Pickles	3	nil	nil
Salt	82	nil	nil
Pepper	38	nil	nil
Tomato paste	51	nil	nil
Sugar	79	nil	nil
Sweets	47	nil	nil
Cheese	18	nil	nil
Sardines	30	nil	nil
Herrings	201	nil	nil
Canned Foods	12	nil	nil
Quinine	22	nil	nil
Aspirin	13	nil	nil
Castor oil	11	nil	nil
Total	1,310	48	3.6

The total of 1,310 official samples represents a decrease of 478 compared with the total for the previous year together with a considerable decrease in the adulteration rate found. The number of prosecutions brought before the Courts was 60 and the fines and costs inflicted amounted to £38. 11s. 6cp. In all this work the Government Laboratory as usual did its best to safeguard the public health in the midst of many difficulties created by the out-of-date Food and Drugs Law, still in operation. These and other related matters have been considered in my Annual Report for 1934 so that nothing need be said here.

As a result of representations and investigation, the importation of skimmed milk or milk with a fat content of less than 7 per cent. was prohibited by Order in Council No. 1634 of 10th April, 1935. This was desirable in view of the fact that the uninformed poor in town and village have used this product, because of its lower price, for the purpose of infant feeding.

An important test case of adulteration of olive oil supplied by a Government contractor, was heard before the President of the District Court with the result that a conviction was recorded and exemplary fine and costs inflicted. On appeal to the Supreme Court the conviction and sentence were confirmed, and cancellation of Government contracts followed. Adulteration of olive oil, with all manner of cheaper vegetable oils, has been rife during the year and it is to be hoped that the above conviction will act as a salutary warning.

Other falsifications were of the usual character. The samples of flour contained weevils and the condensed milk was decomposed and unfit for human consumption. Most manufacturers of sweets have a tendency to add colouring

matters to their products in high excess. In these cases advice and warning where necessary was given. The few samples of drugs submitted were genuine. Thanks to a better season there was a desirable drop in the adulteration of fresh milk.

2. CRIMINAL.

A total of 114 exhibits were examined on behalf of the Police in connection with 34 criminal cases, classified in Table VI:—

TABLE VI (G.A.).—CRIMINAL EXHIBITS.

Exhibits in	murder and stabbing cases	..	..	..	32
"	"	rape and sodomy cases	..	..	13
"	"	poisoning cases, and poison seized from unauthorized persons	..	..	26
"	"	robbery cases	..	..	13
"	"	abortion cases	..	..	12
"	"	dangerous drugs	..	..	14
"	"	forgery cases	..	..	3
"	"	counterfeit coins	..	..	1
	Total	..	..	..	114

The number of cases submitted was almost the same as in 1934 but the total exhibits examined was just half of the corresponding total for last year. The greatest number of productions arose in connection with capital cases but the seven murder cases examined, involving human blood stains, do not call for any special comment.

Suspected materials, seized as poisons in the Paphos District, were found on analysis to consist of Paris Green in one case and impure copper sulphate in another. In a case of attempted suicide, where a young Greek woman ingested 45 grains of quinine, traces of the alkaloid were found in the vomitus and stomach washings. The use of quinine as a poison by would-be suicides is still not uncommon in the Colony.

Specimens of opium and hashish were analysed in connection with an important seizure of 35.6 kilograms of opium and 15.3 kilograms of hashish—the largest of recent years—by the Customs authorities at Limassol. The hashish was found to be of good quality and the opium to be of somewhat low morphine content. Court proceedings were taken and the accused was convicted with confiscation of the drugs in question.

An unusual case from Paphos (Mesoyi village), again submitted by the Customs, concerned a genuine, though fortunately unsuccessful, attempt to prepare hashish. The attempt was unsuccessful because extraneous plant material appeared to have been used, with crude appliances for its preparation. The laboratory findings on the material submitted were entirely negative. The hemp plant (*Cannabis sativa* L.) is here cultivated for the fibre as a field crop, but the production of hashish is unknown and is in any case prohibited. The affair is of interest because it is the first known attempt in the Colony at the preparation of hashish and since it occurred in the only area, viz. Paphos District, where the hemp plant is extensively cultivated for fibre. *Cannabis sativa* has been grown in the Island since Venetian days and probably a long time before that. It is also noteworthy that at least two village names are derived from that of the cultivated plant (vide Jens. Holmboe: *Studies on the Vegetation of Cyprus*, Bergen, 1914, p. 202).

Cyprus is rich in medicinal plants, e.g. squill (vide Wokes and Willimott: *Quart. J. Pharm. Pharmacol*, Vol. VII, No. 3, 1934, pp. 565–573), aloe, colocynth, colchicum, pyrethrum, camomile, opium poppy, henbane, datura, savin, dill, rue, liquorice, etc. In favourable economic circumstances the cultivation of some of these might be well worth while. It has been proposed that the cultural possibilities of these medicinal plants might be investigated in the near future.

3. WATER.

"Water is of such vital importance to Cyprus that the welfare, happiness and prosperity of the inhabitants depend almost entirely upon it." So wrote Mr. R. Russel in 1880 (*British Association Reports*, 1881), on what must be regarded as still the most important present-day problem of the Colony, words which are just as true to-day.

During the year no striking developments occurred either in private efforts in water-finding or in the protection and conservation of available

supplies. With the return of years of normal rainfall, it can be recorded, as already foreshadowed (*vide* Annual Report, 1933), that all principal springs and main sources of supply have recovered their normal output. Nicosia, however, still remains without any satisfactory public water-supply. All data and experience increasingly point to a local origin as the source of our Island water supplies. Since these and other aspects of this problem have already been discussed in my Annual Reports from 1931 onwards nothing more need be said here.

Water samples for analysis as potable supplies amounted to 47 official and one private; of these 40 came from village sources and 8 from towns. A total of 28 of these supplies were returned as non-potable on account of salinity, hardness, suspended matter, organic contamination, or a combination of these. In many cases the samples arose from proposed new village supplies.

4. CUSTOMS AND EXCISE.

There was a considerable decrease in the work of this section and only 14 samples were analysed. These comprised flour, condensed milk, canned herrings, petroleum products, opium, and certain dyestuffs. The flour was pure wheaten flour and, therefore, could be imported in accordance with Order in Council, No. 1582 of 29th May, 1934. The canned herrings, which were representative of a large consignment, were found to be fit for human consumption. A small quantity of opium, found to be unfit for use, was recommended for destruction. The two dangerous drug cases, reported by the Customs authorities, have been considered in the criminal section.

5. ANIMAL VISCERA.

No poison was detected on analysis of eight viscera, submitted by the Police, taken from different farm animals and principally in the Paphos District.

6. SCIENTIFIC EDUCATION.

The examination for the Government Certificate in Chemistry was held at the laboratory on 14th January and onwards. Eighteen candidates presented themselves, of whom seven passed and were awarded the Government Certificate. Owing to the generally low standard attained in the examination results no recommendation could be made for the award of the Papadopoulos Prize. The practical work of most candidates was poor. The sum of £36 was collected in examination fees and paid into the Treasury.

As a member of the Board of Examiners for Cyprus of the Royal Sanitary Institute, London, the Government Analyst set the physics and chemistry section of the final examinations. The Government Analyst was also examiner on the Board of Examiners in Pharmacy in the practical and written work for the Government Qualifying Certificate.

7. OTHER DUTIES.

The Government Analyst acted as President of the following Boards of Survey:—

- (a) Agricultural Stores;
- (b) Agricultural Laboratory;
- (c) Veterinary Stores.

The amount of official correspondence, advisory work, and clerical work again showed an increase.

The following official reports were prepared, submitted to Government and published.

- (a) Annual Report of the Government Analyst, for 1934.
- (b) Potassium Permanganate Poisoning (Willimott and Freiman):
British Medical Journal, 11th January, 1936, Vol. I, p. 58.

Following the lamented death of Mr. A. Haralambides, Agricultural Chemist, (*vide* Obituary, *Cyprus Agricultural Journal*, June, 1935), the Government Analyst acted in this capacity from 1st June onwards and was responsible for the work of the Agricultural Laboratory in addition to his own duties. The seasonal flow of chemical fertilizers (simple and compound) was dealt with as well as a variety of soil samples. Samples of water for different agricultural purposes were conveniently analysed in the Government Laboratory. The remainder consisted of samples of essential oils, of which the Island produces a number in addition to the citrus oils, sumach, and Cyprus wines. A number of pyritic, copper and gold bearing ores were assayed on behalf of private interests operating in the Colony. In addition, many minute papers seeking specialist information were dealt with.

Supplies of chemicals and apparatus were found to be inadequate for the scientific work of this laboratory and this was remedied by securing an increased allotment and the prompt despatch of the indent.

An investigation of tung oil, undertaken in this laboratory, will be considered in a later section.

8. MISCELLANEOUS.

A variety of miscellaneous samples not falling under the headings already concerned may be conveniently dealt with here. Under the system for the control of supplies of alcohol to the Department, 34 samples were examined and found to be up to specification.

Among foodstuffs, one sample of milk was adulterated; 6 samples of bread and biscuits for diabetics contained large quantities of starch and sugar; and a sample of celery salt was genuine. A specimen of Cyprus sausage from Morphou was examined for suspected *cysticercus cellulose* with negative results.

A sample of water, analysed for irrigation purposes, was found satisfactory.

Two private samples of local gypsum from Boghaz, Famagusta District, were analysed prior to export to Hong Kong with the following results:—

	No. 1	No. 2
	%	%
Sulphuric anhydride	44.92	44.12
Equivalent to Gypsum ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) ..	96.60	94.88

Seventeen veterinary samples from different farm animals suspected of having been poisoned were analysed with negative findings.

Four samples of urine were examined and the percentage sodium chloride determined in specimens from the right and left kidneys respectively.

A large number of drugs, galenicals and preparations, arising out of the reorganization of the Medical Stores, were examined with the result that 184 items were recommended for destruction, a course which has now been carried out. Under the Dangerous Drugs regulations, a suspected white drug was found to be cocaine hydrochloride.

Seven samples of gum from the Government Printing Office had proved unsatisfactory for bookbinding. On investigation this was found to be due to thickening caused principally by evaporation. These difficulties were overcome by the addition of a suitable solvent to the materials in question.

Ten archaeological specimens from the Cyprus Museum were reported on as to the presence of mineral or vegetable matter; and 59 ancient coins and metallic objects were cleaned by the elegant reduction method with zinc and caustic soda. Excellent results were obtained whereby the identity of a number of the coins could be determined.

In the course of an investigation of Cyprus umber and ochre, 28 specimens were examined.

9. REVENUE AND EXPENDITURE.

Additions to revenue were made from the following sources:—

	Revenue.	£	s.	cp.
Government Analyst's fees	11	11	3
Lecture fees	36	0	0
Fines inflicted under the Food and Drugs Law	38	11	6
Total	£86	3	0
	Expenditure.	£	s.	cp.
Chemical and Apparatus	34	8	6
Lighting, Heating, etc.	35	11	4
Total	£70	0	1

Excluding salaries it is seen that the Government Laboratory is actually run on a profit although it is not a revenue earning unit.

10. VALUE OF WORK PERFORMED.

Category						Amount		
						£	s.	cp.
Food and Drugs .. .. .	..	..	..	..	..	1,375	1	0
Criminal Exhibits .. .. .	..	..	..	..	..	239	8	0
Water .. .. .	..	..	..	..	..	197	8	0
Customs and Excise .. .. .	..	..	..	..	..	14	14	0
Miscellaneous .. .. .	..	..	..	..	..	918	12	0
Private Work .. .. .	..	..	..	..	..	11	11	0
Lecture Fees .. .. .	..	..	..	..	..	36	0	0
Total .. .. .	..	..	..	..	..	£2,792	14	0

The above figures include private work but do not take into account advisory or consultative work. They are based on the Government scale of fees, and give a fair approximation to the value in Cyprus of the work performed.

11. INSPECTION OF PHARMACIES.

Government dispensaries, private pharmacies and clinics were inspected half-yearly and the Government Analyst, as Chief Inspector under the Dangerous Drugs Laws, carried out examinations of 48 Government and 27 private pharmacies throughout the Colony, all by surprise inspection. The District Compounders again exercised supervision generally in their districts and in the towns in particular. That there was laxity in the making out of D.D. prescriptions on the part of medical practitioners was again obvious. A number of opium preparations, unfit for use, were recommended for destruction which course was duly approved.

It is satisfactory to be able to report that as a result of continued supervision the condition of both Government and private pharmacies, so far as dangerous drugs are concerned, is as satisfactory as can be expected with the powers available under our present laws and regulations. It is probable that it would not have been possible to exercise as much control but for the facility afforded by the adoption of the Metric System, in 1933, both in prescribing and in the book-keeping of dangerous drugs.

Difficulties arose in regard to certain proprietary preparations, for use in pulmonary and bronchial affections, which contained codeine or dionine in small percentage. Power did not exist to enable the Department to exempt these preparations from the provisions of the D.D laws, as appears to be the case in Europe. It was, therefore, recommended that existing stocks be allowed to be re-exported to the manufacturers and that such preparations, containing dionine or codeine to an extent not exceeding 1 per cent. be exempted from these regulations for the future.

The conditions discussed in my Annual Reports for 1933 and 1934 regarding the control of dangerous drugs, continued during the year under review and with a view to strengthening the existing legislation, were the subject of several conferences with the Director of Medical Services.

12. INVESTIGATIONS.

The only agricultural investigation undertaken during the year was a study of the possibilities of the production of tungoil. The information that is now available has been examined and correlated. During the last seven years the cultivation of the tung-oil tree has been tried out in a number of localities of the Island. The tree has done better in open areas on loamy soils near the coast than at higher elevations or in mountain valleys. In all cases the tree has been irrigated. In particular one plantation of about 50 trees at Polis-tis-Khrysokhou has been a definite experimental success. These trees, given six irrigations during the summer, fruited satisfactorily and gave a normal yield of nuts and oil. A detailed examination of the oil

expressed from the nuts has recently been made at the Imperial Institute, London, from which it appears that the tung oil in question has normal analytical constants and is of excellent commercial quality. The whole future of the tung oil tree in Cyprus appears to turn on the question as to whether it can flourish without systematic irrigation. Failing this, it is doubtful if it can compete successfully with the rapidly expanding citrus industry. In view of the importance of this question it is hoped shortly to publish the findings.

One of the most interesting mineral resources of the Island are the umber and ochre beds, and the winning of the ore is probably of great antiquity. Ancient slags have been found to contain considerable amounts of manganese but whether the Phœnicians and Romans used the umber, being easily accessible, as a flux in smelting their pyrites for copper remains very much a matter of debate. The umber beds occur on the line of contact of the pillow lavas with the overlying marls and sedimentaries. The question of the geological origin of the umber beds in Cyprus cannot be discussed here but it is very doubtful whether the theory of contact metamorphism of Gaudry can be accepted (*cf.* C. G. Cullis and A. B. Edge: *Cupriferous Deposits in Cyprus*, London, 1927). But the least geological study of the question shows that the natural resources of the umber must be enormous, and are for the most part untapped.

At Larnaca, the seat of the industry, the ore is exported as raw umber in lumps and as burnt umber in powder, and may be graded into 25 different shades. The colour of the natural umber varies from yellowish brown to dark sepia, according to the manganese content, which has been found to range from less than one per cent. up to ten per cent. It is well known that manganese salts are readily leached out of rocks by percolating water, so that the manganese content of any particular specimen appears to vary according as to whether its position in the umber bed was above or below the geological water table. The subject is by no means one of academic interest only and, so far as our experience goes, the results appear to confirm this theory. Specimens of Cyprus terra verta, which occurs in small pockets in the contact zone, have also been analysed and found to be free from arsenic and copper. The colour is due to the mineral chlorite.

In conjunction with the survey of Malaria in Cyprus of the Rockefeller Foundation a number of observations on brackish waters from different malarial localities have been made. In particular, samples from the Larnaca salt lakes were analysed for salinity and reaction in an attempt to correlate these figures with the presence of eggs, larvæ or imagoes of species of mosquito maturing there. It appears that two species, multicolor and elutus, have different critical salinity points beyond which they cannot exist. On the Kyrenia coast an important observation has been made that eggs and larvæ of *Aedes marice* (fortunately not a malaria vector in Cyprus) can flourish in salt water of extraordinarily high salinity. This work is being continued in co-operation with the Foundation.

An unusual case of poisoning by potassium permanganate was investigated in collaboration with Dr. M. Freiman. The distinguishing feature in this case, a mine-worker of 23, was that the permanganate was not ingested *per os*, but was self-injected through the urethral canal. The total amount of permanganate solution brought in contact with the tissues of the urethra and bladder was equivalent to 20 grams of the solid salt. The case ended fatally and at autopsy extensive burns of the mucous membrane of the bladder and urethra were found. Full details will be found in a paper published in the *British Medical Journal*, 11th January, 1936, Vol. I, p. 58.

STAFF.

It is with much pleasure that I record my appreciation and thanks of the efficiency and loyal assistance of the small staff of the Government Laboratory, and in particular to the Assistant Analyst, Mr. L. C. Haralambides. Without their co-operation in the face of many difficulties it would have been impossible to accomplish the large amount of official and investigative scientific work referred to in this Report.

APPENDIX D.

A SURVEY OF MALARIA IN CYPRUS.*

BY M. A. BARBER, M.A., PH.D.

INTERNATIONAL HEALTH DIVISION OF THE ROCKEFELLER
FOUNDATION.

Among publications on malaria in Cyprus are the papers by Williamson (1903), Ross (1914), Aziz (1934) and the various Annual Reports of the Medical Department. There is further an unpublished Report by Markides (1934). These publications contain in addition to data on malaria full information regarding the climate and physical characteristics of Cyprus, topics which, for the sake of brevity, will receive only brief treatment in this Report.

Meteorology.—Table 1 contains the meteorological return for the first seven months of 1935.

TABLE 1.

METEOROLOGICAL RETURN FOR THE YEAR 1935.
TEMPERATURE AND RAINFALL FOR THE FIRST 7 MONTHS.
NICOSIA.

	TEMPERATURE OF:						Rainfall Amount in inches	Degree of Humidity %
	Solar Maximum F.	Minimum on grass F.	Shade Maximum F.	Shade Minimum F.	Range F.	Mean F.		
January ..	127	25	64	33	31	48.50	1.96	79.02
February ..	134	29	67	37	30	52.00	1.92	75.14
March ..	139	32	75	38	37	56.50	1.60	69.09
April ..	147	35	91	43	48	67.00	1.10	65.70
May..	158	40	105	51	54	78.00	Nil	52.54
June ..	161	35	106	62	44	84.00	Nil	53.54
July..	162	34	105	62	45	83.50	Nil	57.31
Totals ..	146.86	32.86	87.57	46.57	41.00	67.07	0.94	64.76

The rainfall of 1935 (6.58 inches for the first 7 months) is not unusual, but 6.60 inches fell in December, 1934; so that the total winter rainfall was well above the average. The rainfall of all of 1932 was 8.68 inches; of 1933, 8.37 inches; of 1934, 18.84 inches. The importance for malaria of winter rains is great, for the water then stored in the mountains affects the amount of mosquito-breeding water in streams and ponds during the succeeding summer. The rainfall of June, July and August in Cyprus is almost nil, and that of September usually very low. The dryness of the summers aids malaria control in that the amount of water available for anopheline breeding is less during the warm months of the year, when malaria transmission is at its maximum; further, temporary training ditches confining the water in the beds of streams are little disturbed by freshets. On the other hand, larvæ in these streams are not swept out by rains. As regards the prevention of malaria, the advantages of the summer drought doubtless outweigh the disadvantages.

The present survey was done between 22nd June and 2nd August, 1935, a period of barely 6 weeks. The available time was short but much good assistance was available. The Director of Medical Services, Cyprus, Dr. E.A. Neff, very generously put at our disposal practically the whole time of the following

The studies and observations on which this paper is based were conducted with the support and under the auspices of the International Health Division of the Rockefeller Foundation. The work was further aided by the generous co-operation of the Government of Cyprus, especially that of the Medical Department.

* This paper is being published in the *American Journal of Tropical Medicine*.

persons: Mr. Mehmed Aziz, Chief Sanitary Inspector of Cyprus, Dr. G. M. Pietroni, District Medical Officer at Larnaca, Cyprus, and Miss Melahat Houloussi, Laboratory Technician. Mr. John Petrides, Technician in the Laboratory at Cavalla, Greece, accompanied the writer. To these efficient workers great credit is due in the carrying out of this work. In addition we were furnished with abundant laboratory and clerical assistance and transportation. The work was much facilitated by the excellent roads found everywhere in Cyprus. Every district and nearly all parts of the Island were visited, some of them several times.

The amount of malaria found is shown in Table 2. The letters in the column following the date indicate the species of anopheles adults predominating in the villages on the date of survey—"E", *elutus*; "S", *superpictus*; and "M", mixed *elutus* and *superpictus*. The ages of village children examined varied from a few months to 17 years. There were only 2 cases, 15-17 years of age.

For determining the parasite index a thick and thin film was made of each case. All slides were examined by one person, M.A.B. The degree of infestation of parasites is shown as a weighted average of the number of parasites per field; the marginal portion of the thick film, where there is less variation in thickness, was used as standard. This index is here based on positive cases only. The anaemia index was determined microscopically, and is based on the degree of polychromatophilia or basophilia. Only cases with very marked polychromatophilia were here reckoned as being significant for anaemia. The spleens were all examined by Dr. Pietroni, employing the method in common use in Cyprus, that of Ross. Average spleen is also reckoned by the method of Ross.

TABLE 2.
BLOOD, ANÆMIA AND SPLEEN INDEXES BY VILLAGES.

District	Village	Population Census 1931	Date of Survey	Predom. Anoph. spec.	Nbr. Ex'd.	Malaria Parasites		Anaemia	Spleen	
						% Posi- tive	Index of infest.		% en- larged	Ave- rage spleen
Larnaca ..	Teke	28	June 25	M	17	23.5	2.3	0.0	0.0	0.0
	Athienou ..	2,451	July 23	—	45	0.0	0.0	0.0	4.0	1.2
Limassol ..	Asomatos ..	112	June 27	E	25	88.0	2.5	60.0	60.0	3.3
	Akrounda ..	200	" 28	S	14	21.4	2.0	0.0	14.3	1.3
	Zakaki	231	" 28	E	50	40.0	2.0	10.0	46.0	3.0
Nicosia ..	Pyroi	219	July 1	S	43	16.3	1.7	0.0	44.2	2.6
	"	"	" 22	S	12	25.0	3.0	16.7	0.0	0.0
	Dhenia	181	" 1	M	40	72.5	1.9	32.5	72.5	4.3
	Avlona	249	" 2	M	51	15.7	2.3	7.8	25.5	1.7
	Syrianokhori	370	" 2	M	55	41.8	1.7	25.5	67.8	4.0
	Kochati	101	" 4	S	34	53.0	1.8	17.6	77.1	4.4
	"	"	" 29	S	34	64.7	2.0	41.2	85.3	4.8
	Yeri	504	" 4	S	63	14.3	1.9	4.8	14.1	1.7
	Prastio	305	" 12	E	57	47.4	2.0	28.1	35.1	2.6
	Ghaziveran ..	158	" 12	M	41	70.7	1.9	19.5	65.8	3.7
Paphos ..	Kalyvakia ..	160	" 18	S	42	30.9	1.8	14.3	52.4	3.3
	Philia	365	" 19	M	46	43.5	2.0	21.7	71.7	4.6
	Morphou	4,335	" 31	—	43	16.3	2.0	6.9	14.0	1.3
	Souskiou	425	" 8	S	50	18.0	1.3	6.0	42.0	2.9
	Kouklia	547	" 9	M	53	71.7	2.0	60.4	56.6	2.9
	Khrysokhou ..	258	" 10	S	19	21.0	1.7	15.8	19.0	2.0
	Ay. Nicolaos ..	473	" 8	S	46	19.5	1.9	8.7	12.0	1.6
	Sotira	710	" 17	—	31	6.4	2.0	3.2	3.2	1.1
	Trimithi	143	" 24	S	33	72.7	2.8	48.5	60.7	3.8
	Temblos	118	" 24	S	30	26.7	2.1	6.7	35.5	2.5
Kyrenia ..	Ay. Y'rgbios ..	159	" 24	S	36	22.2	2.2	5.6	11.1	1.2
	Karmi	672	" 28	S	79	41.8	2.8	25.3	36.7	2.2
Totals		13,474	—	—	1,089	36.6	2.1	18.5	40.9	2.7

Comment Table 2.—There was some selection in this survey of the more malarious villages, since one of our chief aims was to compare the different species of anopheles as vectors of malaria, and villages with heavy infections offered the best criterion of this matter. But over half of the 25 villages surveyed were selected without regard to a previous high spleen rate; indeed, in 8 of the villages the last recorded spleen rate was under 10%. In any case, the results indicate a large amount of malaria in the Island. In a highly malarious country like Macedonia⁽¹⁾ considerable selection of the more malarious villages would be required to afford average as high as those shown in this Table. The malaria season had well begun in July and some villages showed epidemic conditions, but it is probable that a survey in September or October would show even higher rates.⁽²⁾

As regards the spleen findings, it is probable that examination by the method described by Hackett (1929), the one in common use by the International Health Division of the Rockefeller Foundation, would have detected a large proportion of spleens of smaller enlargement, and that both the spleen index and the average spleen would have shown higher percentages. Markides (1934), compared the two methods of examination in 433 persons of Cyprus. By the Ross method he obtained a spleen index of 54.1, by the Hackett method 63.1.

Species of Malaria Parasites.—Among 399 positive specimens the percentage of the different species of malaria parasite found was as follows: *vivax*, 33.3; *falciparum*, 42.0; *malariae* (quartan), 24.5. Where mixed infections occurred (10 in number), they were classified as the species predominant in the preparation. The distribution of parasite species in the villages was by no means uniform. In Kalyvakia, for example, only *vivax* appeared. At the time of survey, 18th July, the parasite index was 31%. As a rule, a high incidence of *falciparum* was associated with high parasite rates. In only 5 of the 24 villages in which parasites were found was *falciparum* lacking. There was no definite association of a species of malaria parasite with the species of anopheles prevalent in the village at the time of survey. Village with *superpictus* only might have all *vivax* (Kalyvakia) or a very high proportion of *falciparum* (Trimithi, Karmi). In villages in which *elutus* was predominant (Asomatos, Zakaki, Prastio) all three species of parasite occurred.

Gametocyte Carriers.—Gametocyte carriers were numerous. Among 169 cases positive for *falciparum*, 42.0% had gametocytes (crescents). Of these gametocyte carriers, 29.6% had crescents in large numbers, at least one per 100 leucocytes. The second highest gametocyte carrier in our experience was a child 5 years of age, found in the village of Karmi. There were nearly 95 crescents per 100 leucocytes. Such a carrier might infect anopheles over a period of two weeks or more.

Morbidity.—No formal survey of morbidity was made, but in some villages the number of sick was large—almost attaining epidemic proportions.

Anopheline Breeding Places.—We have little to add to the data published by Aziz except as regards the occurrence of anopheline eggs in breeding places. An observation near the village of Tekke is worth recording. In early July, this village harboured many adults of *elutus* and *superpictus* and some of *multicolor*. In a brackish lake in the vicinity of this village, eggs of *elutus* and *multicolor* were abundant but those of *superpictus*, lacking; in fresh water near the village, eggs of *elutus* and of *superpictus* were abundant. There was apparently, then, a selection of places for oviposition by two species, *multicolor* of the brackish water and *superpictus* of the fresh, *elutus* being indifferent. Late in the month the lake diminished in size and became more brackish. *Elutus* eggs were no longer found in the lake but *multicolor* eggs still persisted although in reduced numbers. Apparently the lake had become too brackish for *elutus* although their eggs were still being laid in the fresh water in the

⁽¹⁾ Where "Macedonia" is referred to in this paper it has to do with that portion of Greek Macedonia situated between the Nestos and the Strumon rivers.

⁽²⁾ Two villages were re-surveyed in early October by Mr. Aziz and Miss Melahat and the blood specimens submitted to the writer for re-examination. The parasite index of Souskiou had risen from 18.0 to 75.0; that of Akrounda, from 21.4 to 78.6. These were both villages infested by *superpictus*, a species whose activities begin later than do those of *elutus*. It is probable that other villages of this type also showed increase during the summer.

vicinity of the lake. The eggs of *multicolor* are very characteristic and are easily recognized in breeding places. They were found only in brackish water in this survey.

In the selection of places for oviposition, both of the chief malaria vectors of Cyprus, *elutus* and *superpictus*, seem to be adapted to a greater variety of water than in the case in Macedonia; the result, perhaps, of the less amount of water available in Cyprus. No *maculipennis* was found in Cyprus although a search was made for their eggs, which are easily recognizable, in a great variety of waters varying in altitude from 5,000 feet to sea-level; nor were any adults found in daytime resting places or among those bred out from larvæ or pupæ in the laboratory. *Bifurcatus* was found in the localities described by Aziz, in a stream at Troödhitissa at an elevation of about 5,000 feet, in other mountain localities, and in wells, always in cooler waters. *Algeriensis* and *hyrcanus*, found in Cyprus by Aziz, were not encountered in this survey. These two species are apparently rare in July.

Anopheles Adults in Houses and Stables.—In Table 3, the anopheline density in houses and stables is compared with the parasite rate among village children. The averages, based on the number of houses or stables visited, are only an approximation since it was impracticable to collect all of the anopheles in a given room, but the figures have some value in the comparison of the density of different species as they occur in villages during July. There seemed to be no close relation at a given date between the density of anopheles and the malaria rate. In some highly infected villages only a few anopheles could be found after a long search, but these sometimes showed a high sporozoite rate. Possibly these few were the survivors of larger numbers occurring earlier in the season. This was definitely shown to be the case in one locality (Tekke), which had many anopheles in early July, but very few at the end of the month. Of 4 *elutus* found there on the 23rd of the month, one was sporozoite-infected.

TABLE 3.
ANOPHELINE DENSITY IN HOUSES AND STABLES COMPARED WITH
THE MALARIA PARASITE RATES OF VILLAGE CHILDREN.

Villages with a parasite rate of:	House or Stable	Number of visits	Elutus		Superpictus		Multicolor		All Species	
			Nbr. Coll.	Av. Nbr. per visit	Nbr. Coll.	Av. Nbr. per visit	Nbr. Coll.	Av. Nbr. per visit	Nbr. Coll.	Av. Nbr. per visit
0-19%	H	9	1	0.1	54	6.0	2	0.2	57	6.3
	S	6	2	0.3	69	11.5	2	0.3	73	12.2
	H&S	15	3	0.2	123	8.2	4	0.3	130	8.7
20-39%	H	15	564	37.6	91	6.1	9	0.6	664	44.2
	S	7	42	6.0	162	23.1	11	1.6	215	30.7
	H&S	22	606	27.5	253	11.5	20	0.9	879	39.9
40% and over	H	37	266	7.2	94	2.5	3	0.1	363	9.8
	S	32	363	11.3	284	8.9	13	0.4	660	20.6
	H&S	69	629	9.1	378	5.5	16	0.2	1,023	14.8
Total	H	61	831	13.6	239	3.9	14	0.2	1,084	17.8
	S	45	407	9.1	515	11.5	26	0.6	948	21.1
	H&S	106	1,238	11.7	754	7.1	40	0.4	2,032	19.2

The Sporozoite Index of Anopheles.—During the period, 27th June to 31st July, we made 32 collections of mosquitoes for dissection in the houses or stables of 24 different villages. The species, number dissected and the percentage found sporozoite-positive were:—

<i>elutus</i> ,	428	..	1.8%
<i>superpictus</i> ,	1,134	..	7.8
<i>multicolor</i> ,	37	..	0.0

Elutus gave a percentage positive about the same or a little less than that found in highly malarious villages of Macedonia; while *superpictus* gave a percentage far greater than that found in Greece and exceeding that found

by the writer among *costalis* in West Africa. Villages of Cyprus in which *elutus* occurred in any numbers almost always had a high percentage parasite-positive among village children; on the other hand, those in which *superpictus* occurred in considerable numbers and with a high sporozoite index sometimes gave a low parasite index among children (see Table 2). Season may be an important factor. As noted in connection with the discussion of Table 2 (footnote 2) the parasite index of *superpictus*-infected villages may be much higher later in the summer. In any case, however, there seems to be less malaria transmission by a given percentage of infected *superpictus* than by the same or a less percentage of infected *elutus*. Deviation to domestic animals, more pronounced in *superpictus*, may be one cause of this difference. Further, the degeneration of sporozoites, often found in both species, is more common in *superpictus*.

The percentage sporozoite-positive of *superpictus* varied greatly in different collections, even when made in the same village. In Kochati, for example, the following variations were observed:—

July 4,	46 dissected,	15.3% positive :
„ 5,	135 „	9.6 „
„ 10,	171 „	8.8 „
„ 29,	127 „	0.8 „

We examined 78 stomachs of the collection of July 10 and found only one oocyst in the lot. The results were such as to suggest the presence in the village of one or more effective gametocyte carriers previous to 4th July, and a gradual dying out or dispersion of the infected *superpictus*.

But few *multicolor* were found and none were positive in our dissections. It is noteworthy, however, that 24 of the 31 negatives were found in villages, which, on the same day, harboured infected *superpictus*, the sporozoite percentage-positive of which varied from 2.7 to 11.4.

The character of the blood meals of different species of anopheles is shown in Table 4. This was determined by the precipitin reaction and the tests were done by Dr. J. B. Rice on specimens of stomach blood meals brought to the laboratory at Cavalla, Greece. The rate human positive of blood meals in both *superpictus* and *elutus* is much higher than that found in Macedonia; that of *superpictus*, houses and stable collections combined, being nearly six times as high as that of Greece. The numbers of *elutus* are too small for adequate comparison; if we could rely on these small numbers it would appear that *elutus* in Cyprus is almost a parasite of man. A large proportion of the stomach blood specimens gave a negative reaction because they no longer contained enough serum for a test. It was necessary to collect specimens early in the day before the serum had been digested. In the case of *superpictus*, in which serum seems to be digested more rapidly than in other species, most of the specimens were collected soon after sunrise.

TABLE 4.
PRECIPITIN TEST FOR BLOOD MEALS. ONLY THOSE GIVING A POSITIVE REACTION FOR SOME SERUM ARE INCLUDED, AND ONLY THE PERCENTAGE POSITIVE FOR MAN IS SHOWN.

Species	Houses			Stables			Houses and Stables		
	Total pos.	Nbr. pos. for man	% pos. for man	Total pos.	Nbr. pos. for man	% pos. for man	Total pos.	Nbr. pos. for man	% pos. for man
Elutus ..	133	118	88.6	17	6	35.3	150	124	82.6
Superpictus	133	31	23.3	182	28	15.4	315	59	18.7
Multicolor ..	3	1	33.3	2	0	0.0	5	1	20.0
All species ..	269	150	55.8	201	34	16.9	470	184	39.2

In Macedonia, a large proportion of positives give a reaction for the cow. In Cyprus, the results were very different, as is shown in Table 5, where the reactions for different animals are shown.

TABLE 5.

PRECIPITIN TEST FOR BLOOD MEALS. POSITIVES ONLY ARE INCLUDED.
NUMBERS POSITIVE FOR BOTH MEN AND DOMESTIC ANIMALS ARE SHOWN.

	Man	Pig	Horse	Sheep	Cow
<i>Elutus</i> , houses ..	118	2	3	5	5
„ stables ..	6	1	5	3	2
<i>Superpictus</i> , houses	31	6	89	3	4
„ stables	28	13	131	1	9

Under the caption "Horse" is included donkey and mule, which give a like reaction. Many negatives were re-examined for fowl and dog without increasing the number of positives.

The data shown in Tables 4 and 5 for *superpictus* are largely based on collections from one village, Pyroi. Since specimens had to be collected very early in the morning, it was impracticable to visit villages far from the laboratory. This village, however, is fairly typical of those situated in the plains. It has a population of 219 persons. Belonging to the village are 15 oxen, 3 mules, 32 donkeys, 1,247 sheep and 11 pigs. The sheep are pastured away from the village at night during the period, June to September. The rest of the animals spend the night in or near the village; comparatively few oxen or donkeys are actually within the house-and-stable enclosures at night. There are no predaceous animals in Cyprus larger than a fox and there is less necessity for keeping the animals close within villages. Few of the animals spend the night in stables, and a large proportion of the people sleep out of doors. So it is not surprising that the proportion of human precipitin positives in stables is large; mosquitoes biting man in the open are quite as likely to seek stables as houses for daytime resting places.

In the mountain-side village of Trimithi (Kyrenia) the headman stated that there are 4 oxen, 3 mules, 20 donkeys, 70 sheep, 12 goats and 2 pigs, the most of which are not in the village every night. The population of Trimithi (1931) was 143. In this village we found *superpictus* very scarce, but with a high sporozoite rate. Malaria sickness was rife, and the parasite rate of village children, 72.7%.

On the whole, deviation to domestic animals is less marked in Cyprus than in many malarious countries. This is a matter of much importance in the control of malaria. It seems that when anopheles become more or less parasitic on man, comparatively few of them may transmit a good deal of malaria, and the necessity of thorough prevention of breeding of the mosquitoes is the greater. (Compare highly malarious regions of West Africa, where nearly 100% of *costalis* contain human blood.)

One of the chief objects of this survey was to determine the relative importance of different anopheline species in the transmission of malaria. In some parts of Macedonia, *superpictus* unaided by *elutus* seems unable to maintain a high rate of malaria, at least during cooler summer. In Cyprus, however, this species seems to be a vector of great importance, possibly because of the fewness of domestic animals in villages during the summer and because of the long, hot season. Experiments conducted by us in Greece indicate that this species is more susceptible to malaria infection than any of the other species tested.

As regards other species of anopheles, *elutus* has proved to be an important vector in all regions in which it has been studied. Our data on *multicolor* are too few for any conclusions as to its importance in Cyprus; comparatively few adults were found in this survey. It is a known carrier in some parts of Egypt. *Bifurcatus* in Macedonia has never been found infected in nature and is probably there an unimportant carrier. It is, or was, a dangerous vector in the city of Jerusalem, where it bred in wells and cisterns. For Cyprus our information is limited, but we are inclined to agree with Aziz that it may be

responsible for a low rate of malaria in some localities. The present survey affords data on this subject for only one village, Sotira (Famagusta), where there was apparently no species present but *bifurcatus*, which we found breeding in unused wells. We found a spleen rate of only 3.2 and a parasite rate of only 6.4 in this village. Transmission in early spring or late autumn, when this species is more abundant, may have to be taken into consideration.

The radius of dispersion of anopheles from a breeding place is obviously an important matter in control work and has received attention in the publication of Aziz. In the present survey we have data from only two localities: (1) The villages of Athienou and Pyroi are situated about 2½ miles apart. Adults of *superpictus* were abundant in the houses and stables of Pyroi, which is situated on a stream now partially controlled. After a long search, only 2 adult *superpictus* could be found in Athienou, where anopheline breeding places have been effectively drained. The parasite rate of children in Pyroi was 16.3 (1st July, 43 children) and 25.0 (22nd July, 12 children); that of Athienou (25th July, 43 children) was nil. (2) The large village of Morphou is distant about 2 miles from the highly infected village of Syrianokhori situated near breeding places naturally productive of *elutus* and *superpictus* but now partially controlled. Adults of both species were found in considerable numbers in the buildings of farms intermediate between these two villages, but only one *elutus* was found in Morphou, the search being conducted in buildings nearest the breeding places. The parasite rate of Syrianokhori (55 children) was 41.8% that of Morphou (43 children from the part of the village nearest Syrianokhori) was only 16.3%. Among the 6 positive cases of Morphou, no *falciparum* occurred, a species plentiful in Syrianokhori. These examples indicate that even partial control of breeding places, although not wholly effective in protecting villages nearby, may be of value to villages more distant; since the radius of dispersion is more or less proportional to the number of mosquitoes being produced.

Season of most transmission of Malaria.—The part of the year during which malaria transmission occurs is of much importance in malaria control. In Cyprus, surface water is much more abundant during the spring months and consequently more difficult to de-anophelize, and one would be glad to know how much malaria is being transmitted during that period. One of the best methods of determining the time of transmission is afforded by the examination for malaria parasites of infants born subsequently to the transmission period of the previous year. Since our survey was limited to the month of July, we have only limited data in this matter. Among infants born after 1st November, 1934, we have 62 examined of whom, 12.9% were found infected. The parasite infestation rate among these new cases was high (2.9) and the anaemia and spleen indexes low (16.1 and 10.2, respectively). Forty-one of these infants with 12.2% infected were examined prior to 15th July, 1935. Allowing two weeks for the incubation period, we may infer that these infants were infected during or before June, 1935. These data give but meagre information, but show one method of getting at this important matter. The determination of the species of spring anopheles, of their sporozoite rate and their longevity would give additional information. Clinical cases of older persons occurring in early spring may be only relapse, or may be the first manifestation of an infection received during the previous year.⁽¹⁾

Recommendations as to the control of Malaria in Cyprus.—Much good control work has already been done in Cyprus. Many swamps, large and small, have been drained and much effective work is being done in the training of streams, the removal of aquatic weed and the use of larvicides. Further, extensive spleen surveys have been done and many infected children treated with quinine. The anopheline surveys of the Island by Aziz are notably complete. The large towns and some of the villages have been practically freed from malaria. Several of the recommendations listed below are already being carried out or are contemplated.

(1) Blood specimens of 16 infants born on or later November 1, 1934, were collected by Mr. Aziz and Miss Melahat in October, 1935. They were collected in five villages, all highly malarious. The writer found 87.5% positive, 7 *vixax* and 7 *falciparum*. There was no selection of ailing infants for this test, so that the malaria transmission rate during the summer must have been very high.

1. Accuracy in the measurements of the results of control is essential; in these measurements we have the book-keeping of the business. It may be possible to have one instead of several persons responsible for the accuracy of spleen surveys, even though he may be unable to do all of them himself. It is advisable to control some spleen surveys with parasite surveys, a complete parasite survey of all villages is hardly practicable.

2. Determination of the season of the year during which transmission is most serious, especially of the spring months. Species of anopheles and their abundance in the different seasons would be taken into consideration.

3. The extension of the areas now drained or controlled by weed-removal larvicides and stream-training.

4. The distribution of *Gambusia* in all permanent water. Experiments in Macedonia indicate that these minnows are not likely to remain over winter in precipitous streams subject to freshets; a spring redistribution may be indicated for some localities in Cyprus.

5. The use of certain anopheles-producing streams for irrigation. At first glance, one might propose irrigation as a simple solution for much of the malaria now existing in parts of the plain of Mesaoria of Cyprus, where small streams of mischievous water closely adjoin a thirsty land. But various considerations must govern any plans for irrigation; the suitability of the terrain for economical irrigation, the cost of raising and distributing the irrigation water, and the existence of ancient and highly susceptible water rights. If the remedy by irrigation had to be carried out by the wits of one person, which is fortunately not the case, that person would have to be a combination of biologist, engineer and prairie lawyer. It would seem, however, that with the present cheapness of oil-burning engines something could be done to increase the areas irrigated and to decrease the loss of water now entering the sea both below and above the surface of the ground. The low prevalence of malaria in Kythrea, where a large area is now irrigated by water from a large spring, indicates that irrigation water may be safely distributed in these plains.

SUMMARY.

Malaria prevails to a serious degree in a large number of the villages of Cyprus. The chief vectors are *A. elutus* (sacharovi) and *A. superpictus*, which are the more dangerous on account of the fewness of cattle and other domestic animals present in the villages at night. The amount of malaria seems all out of proportion to the extent of the water available for anopheline breeding, at least during the rainless summers. Our conclusions agree with those of Ross, that an attack on the mosquitoes is the measure most likely to give the best results. We would recommend that the work initiated by him and now in progress be continued and extended along the lines indicated in this Report.

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APPENDIX E.

REPORT ON THE MENTAL HOSPITAL FOR THE YEAR 1935.

By DR. S. LYSANDRIDES, *Medical Superintendent.*

STATISTICS.—On the 31st December, 1935, there were 185 patients (122 males, 63 females), whilst on the 31st December, 1934, there were 183 patients (119 males, 64 females), showing an increase of only 2 patients. The total number treated was 230 (154 males, 76 females).

Admissions.—During the year 47 patients were admitted; of these 35 were males and 12 females. Of the foregoing number 8 males were cases of re-admission.

Discharges.—Total number 36, divided as follows:—Discharged recovered: 18 males, 6 females, a total of 24. Discharged improved: 6 males, 4 females, a total of 10. Discharged not improved: 2 males (Police cases for medical observation).

Escapes.—There was one escape during the year of a male patient who was recaptured and brought back to the Mental Hospital on the same day.

Deaths.—Total number 9, 6 males, 3 females; causes of deaths are given in Table II.

VISITORS.—The Honourable the Colonial Secretary visited the Mental Hospital on the Jubilee day of His Late Majesty, King George V. The Director of Medical Services inspected the Hospital on several occasions and followed the work of the Institution with great interest. The usual quarterly meetings of the Visiting Board were duly held and the Visitors, Mrs. A. Shellish, Munir Bey and Dr. Phynievs, with increasing interest did their best for the betterment of the Institution. Visits from relatives and friends of the patients were as usual numerous; as in the past, visits were allowed daily between 10 a.m. to 12 noon and 2 p.m. to 4 p.m.

BUILDINGS.—There are no additions or changes to report. All buildings, however, were kept in good state of repair, thanks to the prompt attention of the Public Works Department. The painting mentioned in my preceding Report as having been started early in the year was satisfactorily completed and so this long-felt want has been satisfied. I do not wish to lose this opportunity of pointing out once more the necessity of further accommodation in the Male Division as in consequence of the constantly increasing number of inmates the existing accommodation is inadequate. I may also mention that the lack of suitable accommodation for patients accustomed to a higher standard of living than those that are usually admitted is also very apparent and on several occasions recently I found myself in difficulties in coping with such cases. Several patients of this category had to be taken abroad solely as the result of these conditions and contrary to their relatives' desire, who would have otherwise preferred to entrust them to our care and treatment. Patients requiring such special accommodation could, of course, pay accordingly so that the imposition of a much higher charge for them would counterbalance the extra cost for the provision of this accommodation. My recommendation for the erection of a Recreation Room for male patients has not yet been, I regret to say, carried out. Another equally important necessity is the provision of two india-rubber padded rooms—one for each division—there being practically at present no means of dealing suitably with dangerous cases. With regard to the erection of a small Hospital for inmates physically ill, I have been informed with great pleasure that the necessary provision for the cost of this is being incorporated in next year's Estimates.

STAFF.—One male attendant was added and at my recommendation a person with good knowledge of Hospital work was appointed so that it has

been possible for me to entrust him with nursing duties for which there was nobody suitable. The staff consisted of the following:—

The Medical Superintendent.

1 Head Warder

1 Barber Attendant

10 Male Attendants

1 Cook.

5 Female Attendants

1 Laundress.

It is with great pleasure that I record again that the whole of the personnel and especially the Head Warder, Mr. Antonios Stassinou, who is of great assistance to me, carried out their duties to my full satisfaction. The Honorary Dentist, Dr. J. Marcellos, rendered valuable and prompt services during the year.

GENERAL HEALTH—CASUALTIES.—I am very glad to say that health of the patients and staff generally was very good and there are no cases of any severe illness to report. As usual only a few cases of Malaria and Influenza occurred. Thirty-six light cases in all of injury were recorded, of which 8 were self-inflicted, 12 by other patients and 10 resulted from accidents, usually epileptic falls.

TREATMENT—OCCUPATION.—Treatment on more or less the same lines as in the past was followed during the year under review. Sufficient and hygienic food was prepared for the patients and special diets were prescribed for all cases requiring such. The weekly washing of all patients was regularly carried out, our Turkish bath being used for this purpose and treatment by warm immersion and shower baths was applied when indicated. Tonic medicines, such as Iron, Arsenic, Phosphates, Strychnine, Cod liver oil, etc., were administered to numerous cases. An extensive and constant application of Hormonotherapy was carried out. Good results were again attained by the regular use of Gardenal in our many cases of Epilepsy. Pyretotherapy was again extensively applied in the treatment of patients suffering from Schizophrenia, Manic Depressive Psychoses, General Paralysis of the Insane, etc., and Sulfosin Leo was used. Excellent results were attained in several cases of Schizophrenia and Manic Depressive states and satisfactory remissions were observed in cases of General Paralysis of the Insane. This year I tried this treatment also in some cases of Lethargic Encephalitis but with no result. In the treatment of General Paralysis Tryparsamide and Bismuth were used alternatively. Sedative and hypnotic medicines such as Bromides, Hyoscine, Chloral and Paraldehyde were prescribed to excited and sleepless patients.

With regard to occupation, the same system was followed and all suitable and capable inmates were employed in various directions. Some of these patients take interest in gardening and agriculture whilst others help in the daily work of cleanliness and tidying up of the Institution. Some female patients assist in the kitchen and laundry. Needlework and embroidery is also done by a few of the latter. The amount of work that is carried out in the above manner is indeed astonishing and the resulting improvement in their mental condition is most appreciable in many cases.

AMUSEMENTS OF PATIENTS.—The system of keeping the inmates in the open air practically the whole of the day was continued throughout the year. When out of doors the patients are at liberty to amuse themselves as they please. The reading of papers and periodicals provided in the Reading Room attracts a number; other prefer to play games known to them from their childhood; a few show a tendency towards football, whilst others, probably the greatest number, are very fond of the gramophone, singing and dancing to its music, native songs and dances. Cigarettes are provided to all smokers.

FESTIVITIES.—On the occasion of His Late Majesty's King George V Silver Jubilee, special diet was served to the patients and Staff on this day. The food consisted of exceptional dishes and sweetmeats for all three meals. The annual Christmas lunch party was held on Christmas Day in the presence of the Director of Medical Services and the Visiting Board. Appropriate and abundant food was provided and an ample supply of cigarettes was very

generously presented once more by Mr. G. Poulia, a good friend of the Institution. This year's Christmas presents to the inmates, the cost of which is borne by the special Hospital Christmas Fund, were more and better than those of the last year and consisted of such useful articles as pullovers, handkerchiefs, socks, stockings, caps, shawls and toys, which were greatly appreciated. A jazz-band played on that day and brought merriment to all patients and staff.

CHURCH SERVICES.—Instead of the one religious service held in the past for each of the principal religions the following were held during the year: For the Greek-Orthodox a Holy Communion Service on 1st May on the occasion of Easter and one for Christmas on the 27th December. It is worthwhile mentioning that the religiousness evinced by the majority of the patients is indeed so great as to cause the astonishment of the priests. The Moslem had their religious services on the 18th March and 28th December, that is Qurban Bairam and Ramazan Bairam, respectively.

TABLE I—SHOWING THE NUMBER OF ADMISSIONS, RE-ADMISSIONS, DISCHARGES AND DEATHS DURING THE YEAR ENDED 31ST DECEMBER, 1935.

	<i>Males Fem. Total</i>			<i>Males Fem. Total.</i>		
Remaining in Mental Hospital, 1.1.1935 ..	..	..	..	119	64	183
Cases admitted :						
First Admissions	27	12	39			
Re-Admissions	8	—	8			
Total admitted during the year ..	..	..	..	35	12	47
Total under care during the year	..	..	..	154	76	230
Cases discharged :						
Recovered	18	6	24			
Improved	6	4	10			
Not improved	2	—	2			
Died	6	3	9			
Total discharged or died during the year	..	..	..	32	13	45
Remaining in the Mental Hospital on 31st December, 1935.. ..	..	..	..	122	63	185

TABLE II—OBITUARY SHOWING THE CAUSES OF DEATHS DURING THE YEAR 1935, WITH THE FORM OF MENTAL DISORDER AND AGE AT DEATH.

<i>Register No.</i>	<i>Age</i>	<i>Sex</i>	<i>Form of Mental Disorder</i>	<i>Date of Admission</i>	<i>Cause of Death</i>
128	35	F.	General Paralysis ..	26.11.1934	Exhaustion.
356	35	M.	General Paralysis ..	25. 1.1935	Epileptiform attacks.
3	87	M.	Dementia	6.12.1898	Senile Decay.
46	65	M.	Epilepsy	13. 5.1925	Exhaustion.
368	22	M.	Acute Encephalitis ..	9. 4.1935	Collapsus.
133	40	F.	Acute Confusional Psychosis ..	27. 4.1935	Collapsus.
11	73	M.	Dementia	6.11.1907	Senile Decay.
367	66	M.	Senile Dementia ..	29. 3.1935	Intestinal obstruction.
18	45	F.	Schizophrenia ..	9.12.1925	Exhaustion.

TABLE III—SHOWING THE FORM OF MENTAL DISORDER OF THE ADMISSIONS, DISCHARGES (RECOVERIES—IMPROVEMENTS) AND DEATHS DURING THE YEAR AND FORM OF MENTAL DISORDER OF THE INMATES ON 31ST DECEMBER, 1935.

Form of Mental Disorder	Admissions			Discharges (Recoveries—Improvements)			Deaths			Remaining in Hospital.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Oligophrenia or Mental Deficiency (Idiocy, Imbecility, Feeble-mindedness, Moral Insanity) ..	6	—	6	3	—	3	—	—	—	20	4	24
Schizophrenia (simplex, hebephrenia, Katatonia, Paranoides)	5	5	10	2	4	6	—	1	1	48	24	72
Paraphrenia, Paranoia	1	2	3	—	2	2	—	—	—	7	4	11
Manic — Depressive Psychosis (Mania, Melancholia Alternante)	7	2	9	10	4	14	—	—	—	9	6	15
Presenile and Senile Psychosis	1	1	2	—	—	—	2	—	2	3	3	6
Acute Confusional Psychosis	2	2	4	5	—	5	—	1	1	—	1	1
Alcoholic Psychosis	1	—	1	—	—	—	—	—	—	1	—	1
Epileptic Psychosis	6	—	6	2	—	2	1	—	1	11	6	17
General Paralysis of the Insane	2	—	2	1	—	1	1	1	2	6	2	8
Encephalitis Lethargica	2	—	2	—	—	—	1	—	1	3	1	4
Dementia, Secondary or Terminal	—	—	—	—	—	—	1	—	1	14	12	26
Feigned Insanity ..	1	—	1	1	—	1	—	—	—	—	—	—
For Medical Observation	1	—	1	2	—	2	—	—	—	—	—	—
Total ..	35	12	47	26	10	36	6	3	9	122	63	185

APPENDIX F.

REPORT ON VENEREAL DISEASES CLINICS.

BY DR. N. CH. MICHAELIDES.

The five clinics continued their activities throughout the year. Since the inception, 8 years ago, 28,249 patients have attended these clinics, including 18,833 males and 9,416 females.

The distribution of patients is shown in the following table :—

		<i>Males</i>	<i>Females</i>
Syphilis	4,271	2,790	1,481
Gonorrhœa	12,203	8,000	4,203
Gonorrhœa and Syphilis ..	2,970	1,734	1,236
Other Venereal Diseases ..	1,270	973	297
Non-Venereal Diseases ..	5,769	4,134	1,635
Examination not completed	1,766	1,202	564
Total	28,249	18,833	9,416

The number of treatments for gonorrhœa amounts to 1,152,208 (irrigations, douches, bougies, sounds, vaccine antigonococcus, massages of prostate, urethroscope examination, etc.).

The number of injections for syphilis is 125,593 (Arsenic, Bismuth, Mercury, Tryparsamide, Pyretotherapia injections, Iodure, etc.).

Ultra microscope examination for *spirochæta pallidum* 1,708. Wassermann examination 34,512.

Cerebro Spinal Fluid examinations 119—all done in the Venereal Diseases Clinic, Nicosia.

The total cost of the campaign from the 1st January to 31st December, 1935, amounted to £1,337. 14s. 7cp.

The results of treatment are as follows :—

Number of patients cured :—

(a) Gonorrhœa	2,888
(b) Other Venereal Diseases	3,423
(c) Syphilis	64
Total	6,375

The small number of syphilitics shown as cured, in comparison with the 7,241 sufferers, is due to several reasons :—

1. To the long time necessary for the treatment of syphilis, *i.e.* from 4 to 5 years.

2. Many of the patients stop attending (and so their treatment) as soon as they get rid of the initial symptoms (rash, hard sores, etc.) as they think themselves cured. This in spite of advice.

3. Others stop their treatment when the Wassermann examination of their blood is negative.

Lastly many of the patients refuse to have a cerebro spinal fluid examination. In our opinion most of these patients are cured but we do not so record them.

As their long period of treatment will have been completed, during the next year we hope to have a large number of cured syphilitic patients. The number 2,888 representing patients cured from gonorrhœa, in comparison with the 15,173 patients who were suffering from gonorrhœa, is due to the fact that most of the patients think themselves cured as soon as the discharge and the other troubles clear up and so, against our advice, stop attending for treatment.

From the 28,249 patients who attended the clinics, 6,375 were radically cured, 5,769 were examined and found to have no venereal diseases, and 1,766 did not return for a complete examination.

There remains 14,349 patients most of whom are continuing their treatment.

WORK DONE DURING THE YEAR 1935.

Staff.—5 Medical Officers, 11 male and 9 female attendants.

PROPHYLACTIC CENTRES.

The attendances of these institutions during the year 1935, were as follows :—

<i>Nicosia</i>	<i>Larnaca</i>	<i>Limassol</i>	<i>Famagusta</i>	<i>Paphos</i>
19,373 ..	6,218 ..	17,548 ..	2,138 ..	2,560 ..

The above figures are encouraging showing as they do that the public are coming to realize the value of prophylaxis.

NUMBER OF CASES, ETC.

There are five Venereal Diseases Clinics, one in each of the following Districts : Nicosia, Limassol, Famagusta, Larnaca and Paphos.

The actual number of treatment given to new and old cases in all clinics as daily attendances amounts to 258,440, as follows :—

<i>Nicosia</i>	<i>Larnaca</i>	<i>Limassol</i>	<i>Famagusta</i>	<i>Paphos</i>	<i>Prisons</i>
98,290 ..	42,590 ..	51,788 ..	42,170 ..	23,152 ..	450 ..

The number of new cases seen in all centres amounted to 2,770 comprising 1,798 males and 922 females.

These were distributed as follows :—

	<i>Nicosia</i>	<i>Larnaca</i>	<i>Limassol</i>	<i>Famagusta</i>	<i>Paphos</i>	<i>Prisons</i>
Males ..	690 ..	293 ..	297 ..	238 ..	228 ..	52 ..
Females ..	396 ..	224 ..	110 ..	98 ..	89 ..	— ..
Total ..	1,086 ..	517 ..	407 ..	336 ..	317 ..	52 ..

Males.

Out of the 1,798 male patients, 728 cases were of gonorrhœa only and 225 of syphilis only, 50 patients were found suffering from both gonorrhœa and syphilis, 575 cases of acute gonorrhœa and 54 cases of strictures. There were 111 cases of epididymitis of this number, 75 patients had developed these complications before starting treatment. 28 cases of gonorrhœal rheumatism were treated during the year and 6 cases of rectal gonorrhœa. 22 patients were suffering from gonorrhœal cystitis. There were 54 cases of primary syphilis and 164 late manifestation of syphilis—42 cases of syphilis in secondary stage. 5 patients suffering from Tabes. 5 patients suffering from G.P.I., and 30 patients of other syphilitic affections of the nervous system. 307 patients suffering from soft chancre. 240 suffering from balanitis, non-syphilitic sores, etc. 117 patients were admitted as in-patients.

Number of patients cured :—

(a) Gonorrhœa ..	483
(b) Syphilis ..	10
(c) Other Venereal Diseases ..	659

The number of blood specimens sent to laboratory for Wassermann examination was 2,586; 444 of these were returned as positive. 354 patients were examined and found to have no venereal disease.

The distribution of male patients is shown in the following table :—

	<i>Nicosia</i>	<i>Larnaca</i>	<i>Limassol</i>	<i>Famagusta</i>	<i>Paphos</i>	<i>Prisons</i>
Syphilis ..	136 ..	26 ..	21 ..	16 ..	26 ..	6 ..
Gonorrhœa ..	290 ..	139 ..	104 ..	119 ..	76 ..	41 ..
Gonorrhœa & Syphilis ..	14 ..	14 ..	3 ..	9 ..	10 ..	2 ..
Other V.D. ..	66 ..	64 ..	82 ..	4 ..	44 ..	— ..
No Venereal Disease ..	170 ..	32 ..	72 ..	42 ..	35 ..	3 ..
Examination not completed ..	14 ..	18 ..	15 ..	48 ..	37 ..	— ..
Total No. of new cases ..	690 ..	293 ..	297 ..	238 ..	228 ..	52 ..

Females.

Out of the 922 new female patients, 440 were found to be suffering from gonorrhœa only and 155 from syphilis only—68 were infected with gonorrhœa and syphilis. There were 160 cases of acute gonorrhœa, 23 of which were children suffering from vulvo-vaginitis. 25 women were treated for gonorrhœa rheumatism. There were 94 cases of salpingitis most of these had been suffering from gonorrhœa for some time before they attended the clinic. 28 were treated for cystitis and 343 patients from chronic gonorrhœa. 26 were treated for rectal gonorrhœa. There were 12 patients suffering from syphilis in primary stage, 15 in secondary stage, 194 suffering from late syphilis, 83 cases of which were congenital syphilis. 2 patients were suffering from tabs and 3 from G.P.I. 44 with other syphilitic affections of the nervous system. 94 patients were treated for soft chancre and 9 patients were admitted as in-patients. There were 75 patients suffering from other venereal diseases, non-syphilitic sores, etc., 164 were found to have no venereal disease.

Number of patients cured :—

(a) Gonorrhœa	236
(b) Syphilis	7
(c) Other Venereal Diseases	191

451 of the female patients were married women who had become infected by their husbands. The number of the prostitutes presented for treatment was 226.

The number of blood specimens sent to laboratory for Wassermann examination is 1,478, the number returned as positive was 321.

The distribution of the female patients is shown in the following table :—

	<i>Nicosia</i>	<i>Larnaca</i>	<i>Limassol</i>	<i>Famagusta</i>	<i>Paphos</i>
Syphilis	115	7	22	7	4
Gonorrhœa	153	141	62	56	28
Gonorrhœa and Syphilis	17	26	7	8	10
Other Venereal Diseases	23	6	2	—	12
Non-Venereal Diseases	81	20	20	24	19
Examination not completed	7	24	2	3	16
Total number of new cases	396	224	115	98	89

PROPAGANDA.

The campaign against venereal diseases was continued throughout the year. It was made by means of lectures and films in the towns and villages and by the distribution of pamphlets, etc.

PROGRESS OF THE CAMPAIGN.

Below is a comparative table giving the number of cases in primary syphilis and acute gonorrhœa in 1928 and 1935 :—

<i>Males</i>	1928	1935	<i>Reduction</i>
Primary Syphilis	230	54	176
Acute Gonorrhœa	616	575	31
<i>Females</i>			
Primary Syphilis	39	12	27
Acute Gonorrhœa	279	160	119

The good result of the work in the Venereal Diseases Clinics is not only the number of patients cured but also the great number of syphilitic patients who are under treatment and so cannot spread their disease.

APPENDIX G.

REPORT ON THE DENTAL CLINICS.

By J. G. MARCELLOS, *Honorary Dentist, Nicosia and Kyrenia Districts.*

1. In 1931 three Honorary Dentists were attached to the Hospitals to give free dental treatment to indigent patients in the three principal towns of the Colony, viz: Nicosia (including weekly visits to Kyrenia), Larnaca and Limassol.

2. Two years later the dental work extended to the Sanatorium, Leper Farm, the Mental Hospital and the Central and Athalassa Prisons.

3. Early in 1935 it was considered advisable to extend this important work, and during May, of the year under review, two more Honorary Dentists were appointed to do duty in Paphos and Famagusta Districts.

4. This very necessary and valuable work has increased from simple extractions and fillings to serious and complicated dental work, such as the wiring of broken jaws, and the preparation of vulcanite plates for the retention of radium in cases of cancerous growths in the mouth. This latter work being carried out in co-operation with the Surgical Specialist, Dr. C. H. Cuff.

5. Since the inception of the scheme, 5 years ago, 107,101 patients have attended the various dental clinics.

6. The system of Medical Record Cards in the schools has been adopted to great advantage. The marked increase in pupils for dental treatment since the abolition of Mukhtar Certificates in favour of merely obtaining parents' consent continues to be satisfactory.

7. The condition of pupils' teeth for Nicosia and Kyrenia Districts stands as follows:—

No. of schools..	..	..	..	..	..	147
Pupils examined	..	..	..	..	..	11,766
Sound teeth	..	..	..	..	..	23 per cent.
Defective teeth	..	..	..	..	..	77 „ „

8. The total number of daily attendances at the 6 Dental Clinics for the year ended 31st December, 1935, was 34,074, as follows:—

	Nicosia	Kyrenia	Larnaca	Limassol	Famagusta	Paphos
Consultations	7,095	1,075	8,152	3,042	1,485	2,315
Pyorrhœa	673	88	112	18	234	18
Disease of mouth	294	43	284	27	32	19
Operations	4	—	—	—	1	—
Extractions	2,461	709	778	555	540	400
Fillings	1,299	261	93	157	13	105
Temporary Fillings	487	88	118	3	47	354
Vulcanite plates	16	2	—	—	—	—
Scalings	378	58	21	39	—	79
Total	12,707	2,324	9,558	3,841	2,352	3,290

9. Full reports for the work of all dental clinics may be given on demand.

During the last quarter of the year 1935, all dental clinics, after advice, have inaugurated a uniform system of school treatment, and on personal inspection I was satisfied with the results ensured.

It may, however, be mentioned that for the absence of travelling, the Honorary Dentists of Paphos, Famagusta and Limassol are confined to dental treatment in the town dispensaries and schools. A slight increase to the honorarium and a travelling allowance might extend this service to villages as well and thus enable school children even in remote places to receive this valuable aid accounting for the improvement of health.

As it will be seen from my Annual Report figures, the dental work in the two Districts of Nicosia and Kyrenia has increased by 20 per cent. as compared with the year 1934. In this connection it may be mentioned that the marked increase has unavoidably taken much more of my time than originally anticipated.

APPENDIX H.

**REPORT OF THE COMMITTEE APPOINTED TO INVESTIGATE THE
PROPOSED REVISION OF MUKHTARS' CERTIFICATES
OF PAUPERISM.**

Object : "To report on the possibility of reducing the number of persons at present enabled to enjoy free Hospital treatment and free issue of drugs and to recommend suitable measures for the attainment of this object."

EXTENT OF FREE TREATMENT.

2. The following table compiled from records kept in the office of the Senior Medical Officer is a fair picture of the situation :—

	1932		1933		1934
	—		—		—
Total number of in-patients at the six Hospitals	4,733	..	4,878	..	5,100
Total number of in-patients treated free	3,769	..	3,943	..	4,330
Total number of out-patients ..	108,012	..	115,273	..	125,446
Total number of out-patients treated free	101,668	..	111,002	..	113,110

MUKHTAR'S CERTIFICATE OF PAUPERISM.

3. The method by which sick persons obtain free treatment is that they get a certificate from the Mukhtar of the village or quarter in which they live in the form shown below :—

MUKHTAR'S CERTIFICATE OF PAUPERISM.

I hereby certify that..... { Son
Daughter
Wife
of.....of this village is a pauper and unable to pay for :—
{ (a) Drugs
(b) Hospital Maintenance
(c) Medical Attendance } Strike out unnecessary items
and that this certificate is issued after due enquiry.

(Signed)..... Mukhtar (L.S.)

N.B.—The issue of the foregoing certificate renders the Mukhtar personally responsible for the refund to Government of the cost of any supplies or services rendered under (a), (b) or (c), should it be ascertained to have been improperly issued.

It has not been found possible to trace the origin and history of this form, unless it originated in Government Standing Orders 1916, XXV, Hospitals, section iv. 2. (referring to Nicosia Hospital only), page 46, but it will suffice to state that a policy to give free treatment to paupers has been slowly converted into free treatment not only for poor persons but also for persons owning land and property. As will have been seen from the figures given in paragraph 2 above, this free treatment has gradually been extended to approximately one-third of the total population. In this connection it may be pointed out that on the certificate, the Greek rendering of the English word pauper is "without resources" and the literal Turkish translation (Redhouse) is "poverty."

It may be added that Mukhtars often insist on the payment of a fee of 4½cp. or more for the issue of this certificate, a procedure which is hardly in accordance with the policy of free treatment for paupers.

SOME EXAMPLES OF ABUSE.

4. Thousands of examples of the abuse of the present system of issue could be given but we follow with a few, general, typical examples :—

(a) Men of considerable property are given certificates as evidenced by a Nicosia citizen, worth several thousand pounds, who recently presented himself at a neighbouring Hospital and proffered a Mukhtar's certificate to enable him to receive complete X-Ray examination free. A few days later a patient presented, at the same Hospital from Kato Dhrys with over £100 in notes on his person and with a certificate of pauperism.

(b) At all Hospitals it is a daily occurrence to see individuals quite able to walk arrive at the out-patients Department in taxis and hired vehicles equipped for their treat with such certificates.

(c) Scores of patients present for admission to Hospital who have already spent considerable money in private clinics in the towns. They are finally brought to Hospital with Mukhtar's certificates and of course treated free.

(d) Ninety-five per cent. of all certificates are issued certifying that the patient is so poor that :—

- (i) he cannot pay for drugs ;
- (ii) he cannot pay for Hospital maintenance ;
- (iii) he cannot pay for medical attendance.

We cannot believe in all these cases it is not possible for drugs at least to be paid for or even a small contribution to be given towards maintenance while in Hospital.

PROPOSALS.

5. The task of submitting proposals which would not cause undue hardship to poor persons genuinely unable to pay and would also ensure that no persons would be deprived of medical treatment owing to high charges has not been an easy one. At the same time it has been necessary to consider the effect of our proposals on medical practitioners outside the Government service. It is obviously undesirable that these gentlemen who have qualified at considerable expense should, by reason of free treatment given by the Government to persons who are able to pay for it, be deprived of reasonable prospects of making a livelihood. This happens now and is the cause of much legitimate complaint by the majority of private practitioners. It is felt that by reason of the following proposals and when Government Medical Officers are no longer allowed private practice that their incomes will not be unduly interfered with and more co-operation will result. Our proposals, in short, are that there should be three classes of certificates issued by village authorities including Mukhtars and Azas of quarters in towns.

PROPOSALS : PAUPERS' ROLL.

6. We recommend that a white certificate should be issued for paupers and we have described a pauper as "a person without resources and not in a position to work." We have to suggest that a pauper's roll should be prepared in each village or quarter, to be revised yearly under the supervision of the district administration with, in the towns, the help of the municipal authorities. It is realized that a certain amount of latitude may have to be given in the reading of the term "without resources," but with supervision on the part of the district administration the paupers' roll should not be unduly large. It will be observed that no note is made on the form regarding the dependents of paupers as, if they have wives or children without resources who are not in a position to work, they too will automatically be placed on the paupers' roll.

PROPOSALS : DAILY WAGE EARNERS.

7. The next class to be considered is that of daily wage earners, earning not more than 15cp. per day and their dependents. We realize that employment is often precarious and that loss of employment due to sickness usually means loss of income especially where there are young children in the family and the wife is unable to work. But we consider that these people should not be dealt with in the same way as absolute paupers and we suggest that the Mukhtar and two Azas should be empowered to give blue certificates (renewable yearly) to daily wage earners, whose earnings do not exceed 15cp. per day and to their dependents if they are in the same category. The certificates would be counterfoil and would be examined by the district administration. The preparation of a roll, would, we consider, cause an unnecessary amount of work for Mukhtars who are already heavily burdened with clerical work in other directions. We suggest that there should be a small property limit of £20 as in villages some daily wage earners own a part of a field or trees and further that no consideration should be taken of the house in which the man or woman lives. Holders of such certificates would be required to pay :—

- 1cp. per visit for drugs and dressings.
- 1cp. per day for Hospital (in-patient) treatment.

No fees are to be paid to Medical Officers. We consider that our proposals will not involve any hardship and will not prevent persons in need of medical or hospital treatment from applying for it. They will bring to an end the indefinite extension of free treatment and will make people realize that they cannot get something for nothing, unless they are real paupers.

PROPOSALS: SMALL FARMERS AND TRADESMEN, ETC.

8. The next class—for we consider that it is necessary to have three classes if the principle of avoidance of unnecessary hardship to poor persons genuinely unable to pay is to be maintained—is that of small farmers, tradesmen and artisans, etc. There are people of this class in the villages who are unable to pay fees demanded by privated practitioners and who, would, if medical treatment were not provided by the Government, be forced to go without it or, as they not infrequently do at present, call in the doctor too late. We have had no small difficulty in preparing a definition of this class and are of the opinion that the present definition will probably require revision after the experience of one year. We recommend as a trial that the Mukhtar and two Azas should be empowered to give red certificates (renewable yearly) to a person with property exclusive of the house in which he or she lives, not exceeding £150 in value whether mortgaged or not or who is a wage earner with a wage of over 15cp. per day and not exceeding 3s. per day and the owner of property not exceeding £20 in value exclusive of the house in which he lives or to the dependents of such people if they are in the same category. Holders of such certificates would be required to pay:—

(a) For drugs and dressings, from 2cp. to 6cp. per visit at the discretion of the Medical Officer.

(b) For Hospital (in-patient) treatment, from 3cp. to 6cp. per day at the discretion of the Medical Officer.

No fees are to be paid to Medical Officers.

ADDITIONAL RECOMMENDATIONS.

9. Closely connected with our proposals formulated above are the abolition of private practice for Government Medical Officers (*vide* Senior Medical Officer's scheme of reorganization with the Government) and the revision of the Government charges for drugs and dressings which is under contemplation. The former will favourably affect private practitioners and the latter will ensure that reasonable prices will be charged to patients who are called upon to pay.

We recommend, in addition, although this is not strictly within our terms of reference, that there should be, in the near future, a complete revision, combined with a standard scale for all Hospitals, Government and State-aided, of charges for in-patient maintenance and treatment.

CHILDREN OF SCHOOL AGE.

10. It is of first importance in our view that any action taken in connection with the issue of pauper and other certificates should not affect children of school age. It is understood that there are difficulties in regard to the dental and ophthalmic treatment given to school children by specialist officers, especially the issue of Mukhtars' certificates and the written permission require from parents for this treatment to be given. We consider that at present this treatment should be given free at the school to any child enrolled in elementary schools, without the necessity of obtaining a Mukhtar's certificate, and we hope that in due course a school health service will be gradually developed.

LEGISLATION.

11. It would appear necessary, if our recommendations are adopted, to legalize the proposed certificates and in particular to provide that any Mukhtar obtaining or seeking to obtain payment for the issue of certificates shall be deemed guilty of an offence under section 15 of Law 19 of 1931.

12. We attach specimen forms* of the certificates referred to in paragraphs 6 to 8 of this Report.

E. A. NEFF,
Senior Medical Officer.

B. J. SURRIDGE,
Commissioner, Larnaca.

* Not reproduced.

APPENDIX I.

REPORT OF THE DISTRICT MEDICAL OFFICER, LIMASSOL.

By G. M. GIBBON, M.B., CH.B.

NOTIFIABLE DISEASES.

Enteric Fever	75	Chicken Pox	45
Dysentery	28	Leprosy	2
Pulmonary Tuberculosis ..	37	Scarlet Fever	1
Cancer	15	Other notifiable Diseases	Nil
Diphtheria	2		

LIMASSOL TOWN.

Limassol Town has been quite satisfactory as regards Public Health. There have been no epidemics, but there were 19 cases of Typhoid and 3 cases of Dysentery all of which were sporadic. No doubt the mode of infection has been by unknown carriers infecting raw vegetables and contamination of food by flies from sundry ubiquitous excreta.

During the summer the Department commenced to employ Anti-Typhoid Vaccine and 415 persons received the necessary prophylaxis.

11 cases of Pulmonary Tuberculosis were notified as against 20 cases in 1934.

I consider, however, that this is a definite underestimate of this disease, and poverty and over-crowding in unhygienic dwellings still continue to be the main predisposing cause of this disease.

Malaria.—According to Spleen Rate Returns there has been a slight increase within the Municipal boundaries.

The following are the rates for the past five years:—

1931	3.3%	1934	0.7%
1932	1.4	1935	3.6
1933	1.1		

The figure (3.6) for 1935 is not in my opinion due to an increase of prevalence, but to several malarious families in search of work having migrated from the country to the town.

The Mayor and the Council continue to be most helpful in Public Health matters and continue to improve their town whenever finances permit.

The Municipal Doctor and Sanitary Inspector are both energetic and efficient and are doing good work.

The water supply of the town originating from a chain of wells, the Polemidhia wells and the Ayia Irini Military supply has at all times been, abundant. All sources have been regularly examined throughout the year and Bacteriological Reports have varied between "Fairly satisfactory," and "Not entirely satisfactory for drinking purposes."

Consumers are advised to boil their drinking water but the absence of water-borne epidemics in the town is a fair indication of its purity.

The two general markets continue to be conducted on efficient and good sanitary principles. Good quality meat, examined and stamped by a conscientious Meat Inspector has been supplied throughout the year. The slaughter-houses are old and generally unsuitable, but I understand, new ones are included in the 1936 Municipal Estimates.

There is still one public latrine in Limassol but sites for other have been selected and 1936 should see considerable improvement as regards public convenience.

RUBBISH DISPOSAL.

I regret that no advance has been made as regards Rubbish Disposal, and it is now spread on lands outside the Municipal area.

Other schemes have been put forward for consideration but they all revolve round the question of expense.

LIMASSOL DISTRICT.

In the country, Public Health has also been satisfactory. There were no epidemics but at Ephtagonia there was a small outbreak of Typhoid where six cases occurred.

The water supply throughout the District has been ample for all personal requirements.

The covering of wells and pipe conduction wherever possible is very essential because many of the villagers' troubles arise from well pollution by their own infected buckets.

SCHOOLS.

A certain number of School latrines have been built throughout the year. On inspection, school children were found to be clean and non-verminous, but there are a regrettable number of juvenile trachomatic cases.

MALARIA.

Malaria continues to be the big problem in the District. Owing to abnormally heavy winter rains Anti-Malarial work was difficult and expensive and there has been a definite increase of Malaria throughout the whole District.

The high spleen rates are found in villages in river areas. The total spleen rate in Limassol Town and District is :—

1931	..	..	..	9.5%	1934	..	..	..	6.8%
1932	..	..	..	8.1	1935	..	..	..	15.1
1933	..	..	..	6.3					

During the year 2,167 cases of malaria were treated in Limassol Hospital, and Atebrine and Plasmochine therapy was carried out with considerable success in many cases. 515,756.0cc. Mixt. Quinine, and 14,258 Capsules and Tablets were distributed free of charge to villagers and school children.

The usual Anti-Malarial measures were carried out including 1,823,838 ft. of drains made and cleared in river beds.

There was also an intensive Anti-Malarial campaign carried out at Chiftlik Phasouri and neighbourhood. The following are interesting data of Public Health and Sanitary work during 1935 :—

1. House to house inspections	..	..	..	..	489,202
2. Samples of water sent for Bacteriological Examination	..	..	..	..	29
3. Vaccinations performed	..	..	..	..	1,088
4. Inspections of Hotels, Factories and Public Buildings	..	..	..	..	3,168
5. Samples taken under Food and Drugs Law 22 of 1926	..	..	..	..	151
6. Prosecutions	..	..	..	..	10

HOSPITAL AND DISPENSARY.

The total number of admissions was 805 as compared with 757 in 1934.

The total number of operations was 330 as compared with 414 in 1934.

During 1935 about £400 was spent on alterations and renewals at the Hospital. The chief improvements were the installation of Flush-Drainage Sanitary System throughout the whole building and annexes. A new Ante-Theatre, a new men's bath cum dressing room and a Dispensary store. Nevertheless more accommodation is wanted for private patients, and this can only be found by building separate Sisters' quarters on the land purchased by the Department last year, and then utilizing their present quarters for this purpose. There is also a great lack of Maternity accommodation. This work in the Hospital increases yearly, and in 1935, 82 cases were accommodated. There are only two Maternity beds and accommodation in the General Female Ward is constantly being required for this purpose.

X-RAY INSTALLATION.

1. Films taken	..	..	..	..	212
2. Screenings	..	..	..	..	88
3. Barium Meals	..	..	..	..	22
Total	..	..	..	..	322

This apparatus continues to work satisfactorily and Mr. P. Petrides, the Senior Male Orderly under medical supervision, operates it in a very efficient manner.

MATERNITY.

The Government Midwife in Limassol Town has again completed a very satisfactory year's work with 114 cases.

VENEREAL DISEASES.

During the year under review V.D. Prophylaxis made great strides. Inefficient private prophylactic stations have been abolished and Limassol Municipality opened a free Prophylactic Station on the 15th March. During nine and a half months of 1935, 17,548 treatments were carried out.

Furthermore plans have been approved of a new and modern institution to be erected in the coming year.

At the Government V.D. Clinic under the charge of Doctor S. Pastides, 413 patients with 52,428 attendances were treated as compared with 571 and 49,757 respectively in 1934.

DISPENSARY.

During the year ending 31st December, 1935, the work in this Department has been considerably increased thus :—

	1934	1935
Out-Patients excluding Eye and Dental cases	21,628 ..	26,319
Prescriptions	45,216 ..	53,435

The building of this Department has considerably improved. A new Store room was added and much of the interior was redecorated. An additional Consulting room is still, however, required.

MEDICAL OFFICERS.

During the greater part of 1935 three Medical Officers were attached to Limassol Hospital, but in November the number was reduced to two. Since that date the routine work has been completed but it is absolutely evident that from the volume of work done at Limassol Hospital and other Public Health duties, also in view of the new rural Itinerary, that another Medical Officer is urgently required.

EYE DEPARTMENT.

The Honorary Oculist examined and treated 2,343 new cases, 7,939 repeat visits were made, as compared with 2,113 and 7,967, respectively, for last year.

DENTAL DEPARTMENT.

The Honorary Dentist examined and treated 792 new cases, 1,089 repeat visits were made as compared with 924 and 1,006 respectively for last year.

PRISONS.

The health of the prisoners has been surprisingly satisfactory, in spite of the continued unhygienic state of the prison (*vide* my Report No. 68/35 of 14th June, 1935).

6 prisoners were admitted to Hospital for a total number of 47 days as compared with 1 and 1, respectively, in 1934.

APPENDIX J.

LEISHMANIASIS (KALA-AZAR).

BY DR. THEODOSIOS CHR. ASTREOS, M.D.,
Acting District Medical Officer, Kyrenia.

The value of anti-Kala-azar special treatment (neostibosan) as confirmative diagnosis of the mediterranean visceral leishmaniasis.*

The following illustrates a case of Kala-azar, which although microbiologically unconfirmed, presented all the characteristic clinical symptoms, was positive for the serological tests (aldehyde Napier and antimony Chopra, Gupta and David), the Hæmatological pictures of the disease, and has finally been confirmed by the striking result obtained by special (neostibosan) anti-Kala-azar treatment.

While Kala-azar occurs in many parts of the Orient and is found in many countries which border on the Mediterranean, no case has been reported in Cyprus, so far as I have been able to ascertain from the literature.

The disease is known to have existed in Greece since 1835, when first Doctor Reser observed this splenomegaly on children in the Island of Spetzæ and described the disease in a meeting of the Medical Society of Athens on the 15th October, 1835. After that follow many descriptions of the disease by Greek doctors, but the most perfect of them may be considered that of Yianakopoulos (1879) and Tetzis (1881). Clarke observed cases in India and published the known clinical description in 1882.

This case is very interesting because of the high mortality rate of the untreated disease (95%), and because the disease is liable to be confused with malarial splenomegaly, which is prevalent in this Island.

REPORT OF CASE.

Christos Constantinou, a boy of 8 years old, admitted in the Kyrenia Hospital for splenomegaly, fever and anæmia. Malarial splenomegaly and anæmia was diagnosed and although the bacteriological report for malaria parasites was negative, an intensive anti-malarial treatment with 4 injections of atabrin 0.3 and 8 injections of quinine 0.50 was applied, which proved quite ineffective. It was at that time I suspected Kala-azar.

History.—Born in a rather mountainous village (Lapithos), living among goats and sleeping in a room where bed-bugs are permanent inmates. No history of previous illness until nine months before admission into the Hospital when he had a mild attack of symptoms of malaria with diarrhœa. The patient's mother stated further that in a few months she noticed that his abdomen was increased in size and for this condition he was treated in the Nicosia Hospital with quinine, administered orally for 12 days. Later he was given quinine injections by a private practitioner. One month later he was seen by another private practitioner, who applied anti-malarial treatment with quinine unsuccessfully.

Physical Examination.—The patient was of a strikingly pale yellow hue. This was hardly the typical lemon yellow of an advanced pernicious anæmia. The mucosæ as well as the skin showed this pallor. There was no jaundice. The skin was rough and the hair dry thin. The cardiac impulse was easily noticeable against the thin chest wall. The abdominal veins were markedly enlarged and formed the characteristic epiphlevon. The margin of the spleen extended into the right iliac region and reached to within three inches of the pubic symphysis. The liver extended in the mammary line 6 c.m. below the costal margin. Nothing abnormal with the lungs and heart. Dropsical effusions in the scrotum.

The temperature was recorded every two hours when suspected Kala-azar and a double and sometimes triple rise was demonstrated.

I wish to emphasize that the most desirable method of diagnosis involves the finding of parasites (*Leishmania Donovanii*) through microscopic or cultural examination of material from the spleen, liver or bone marrow.

* Read before the Cyprus Branch of the British Medical Association.

It should be recognized, however, that there may be many occasions as in this case, in which such a method is not possible, owing to the critical condition of the patient, and where serological tests may be employed.

It must be also borne in mind that the value of the aldehyde and antimony tests, which were used in this case by Dr. Gosden, and which proved both positive, has been already established, both in Indian and Mediterranean visceral leishmaniasis and which, according to the conclusions reached at the meeting of specialists at Rome, in August, 1934, the reliability of these serological tests is a matter of great importance.

The formalin test is the most satisfactory of the two reactions which demonstrates some substance, probably euglobulin, that is present to a marked degree in advanced Kala-azar sera. The test is positive in about 90 per cent. in Kala-azar sera.

Blood Change.—The differential blood count, which apart from the demonstration of the protozoon and the serological tests is the most important diagnostic feature, is as follows:—

Red cells 2,000,000 per cmm. White cells 3,058. H.B. 40%.

Differential count: Neutrophils 38%; Eosinophils 1%; Small Lymphs 17%; Large Lymphs 19%; Large Hyalines 25%.

The characteristic feature is a leucopenia associated with a relative increase in the large lymphocytes.

The characteristic decrease in the polymorphonuclears is observed also in malaria but only after 3–5 hours after administration of quinine.

In chronic malaria the spleen is harder and not as large as in this case. Plasmodia are present while in the present case repeated examinations by Dr. Gosden proved negative and the fever did not yield to intensive anti-malarial treatment.

Typhoid and paratyphoid are of shorter duration than that of this case and in addition the specific agglutination reaction proved negative.

Wassermann reaction proved also negative.

As I already explained the disease may be easily confused with malaria owing to the characteristic triad of symptoms, fever, splenomegaly and anaemia, common to both diseases, especially in malarious countries such as Cyprus.

However, the characteristic double rise of temperature observed and the failure of the systematic quinine treatment necessitates the clinical diagnosis of leishmaniasis.

Double rise of temperature, anaemia and splenomegaly are observed in leukemia or pseudoleukæmic conditions, but in such cases enlargement of the lymphglands and the characteristic blood changes are observed.

TREATMENT.

Antimony, discovered in 1908 to be lethal to trypanosomes, was found by D. Christina and Caronia in 1904 to cure cases of Kala-azar in children. They injected a solution of tartar emetic intravenously. Its value in Kala-azar was soon confirmed by Rogers, Muir and others. The value of treatment, however, with these drugs was long and tedious, extending over a period of three or four months. Reactions were not infrequent and about 10 per cent. of the cases treated died from toxic reactions and complications caused by the antimony.

For these reasons, one of the newer pentavalent antimony compounds should always be used if possible. The compounds which have been most used are Neostibosan (Bayer-Meister-Lucius), Urea Stibomine (first prepared by Brachmachari, India) and Neostam. (Burroughs Wellcome and Co.)

In this case I applied Neostibosan treatment administered intramuscularly. The initial dose was 0.05 and the maximum 0.30 grms.

Eight injections, one 0.05, two 0.10, three 0.20 and two 0.30 grms., in eight consecutive days were injected. No reaction occurred. Amelioration has been striking. The fever was persistent at the end of the course of treatment, but disappeared completely in three days' time after the last injection. Complete uneventful recovery followed.

The size of the spleen when he was discharged from the Hospital, that is in 20 days' period of feverless condition, was found to be the half, and after one month when examined again was found to be quite normal. The boy was examined subsequently every three months and his condition remains quite satisfactory.

Blood Change.—Seven days after the last injection of Neostibosan the differential blood count was as follows:—

Red cells 3,500,000 per cmm. White cells 7,187 H.B. 68%. Neutrophil leucocytes 54.5%. Small lymphocytes 23%. Large lymphocytes 5.5%. Large hyaline cells 15.5%.

SUMMARY.

The case is the first reported in this Island and my diagnosis has been based on the following reasons:—

(1) Characteristic clinical symptoms; (2) Absence of malaria parasites; (3) Complete failure of systematic anti-malarial treatment; (4) Positive serological tests; (5) Characteristic hæmatological pictures; and (6) the diagnosis finally was confirmed by the striking result obtained by the Neostibosan special anti-Kala-azar treatment, of which the diagnostic value may be considered indisputable.

Thanks are due to my chief, Dr. E. A. Neff, for permission to publish this case and to Dr. M. Gosden for the bacteriological work offered in the case.

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APPENDIX K.

**ANNUAL REPORT ON THE PUBLIC HEALTH WORK AND ACTIVITIES
OF THE MUNICIPAL CORPORATION OF NICOSIA
FOR THE YEAR 1935.**

FINANCIAL.

Revenue and Expenditure.

1. The total receipts of the Corporation amounted to £21,309. 9s. 4½cp. The total expenditure of the Corporation amounted to £26,159. 17s. 5cp.

Contributions to Hospitals and Infant Welfare Centre.

2. A sum of £531. 17s. 7cp. was paid as contribution to Hospitals and a sum of £106. 7s. 5cp. as contribution to the Infant Welfare Centre, Nicosia Town. A further sum of £150 was paid as contribution to the Anti-Tuberculosis League.

Conservancy of the Town.

3. A sum of £3,192. 17s. was expended for the conservancy of the Town. This amount includes all expenditure incurred by the Corporation in connection with keeping the streets and public places in good sanitary condition. It includes also expenditure in connection with anti-mosquito sanitary and public health work.

Salaries of Medical Staff, Sanitary Staff, etc.

4. A sum of £770. 18s. 5cp. was paid for the salaries or remuneration of :—

- (a) Municipal Health Officer.
- (b) Municipal Engineer.
- (c) Surveyor of the conservancy of the Town and Inspector of Municipal Market.
- (d) Municipal Sanitary Inspector.
- (e) Inspectors of Slaughter-houses.

Note.—The amount representing the wages of 12 Sanitary Labourers employed by the Corporation during the last six months is included in the item under head "Conservancy of the Town."

A sum of £40 was expended for the burial of paupers' corpses and for the supply of medicines to poor persons.

Acquisition of Land or Premises for widening Existing Streets.

5. A sum of £30 was paid for the acquisition of premises for widening and straightening existing streets.

Maintenance of the Poor House and Other Charities.

6. A sum of £1,191. 8s. 1cp. was expended for the maintenance of the poor house and other charities.

Medical and Sanitary Staff.

7. The Medical and Sanitary staff consisted of :—

- (a) Two Municipal Medical Officers of Health.
- (b) One Surveyor of Conservancy.
- (c) One Municipal Sanitary Inspector.
- (d) 12 Sanitary Labourers.

Total Expenditure for Public Health.

8. The total expenditure relating to public Health amounted as it appears from the preceding paragraphs to £5,105. 3s. 6cp. viz about 19.5 per cent. of the total expenditure of the Corporation during the year 1935.

PUBLIC HEALTH.

Housing and Town Planning.

9.—(a) 103 new houses were erected which have complied with the sanitary requirements.

The building regulations were enforced as far as possible.

(b) About 71 houses have been repaired.

(c) One building was set back on payment of compensation for widening existing streets.

(d) Plans have been prepared in respect of nearly all the streets showing the future width of such streets and the direction that they shall take.

Scavenging and Refuse Disposal.

10.—(a) All the main streets and public places in the Town were swept and cleaned every day between midnight and 5 p.m. The other streets were swept and cleaned once a week and oftener when necessary.

(b) In addition to the general sweeping and cleaning hereinbefore mentioned all the central streets of the Town were generally swept and cleaned during day time when and where necessary.

Every precautionary measure was taken to avoid dust in the carrying out of such sweeping and cleaning.

(c) The Town refuse was regularly removed from the streets, public places and houses by motor lorries properly covered.

(d) Most of the Town refuse is converted into fertilizers by the Cyprus Fertilizers Company and a sufficient quantity is sold to farmers to such distant places as approved by the Sanitary Department.

Anti-Mosquito Work.

11.—(a) 75,143 inspections of houses have been made by the Municipal, Medical and Sanitary Staff in order to ascertain whether any mosquito breeding places existed.

(b) 2,651 notices have been served on owners or occupiers of premises where mosquito breeding places were discovered. In consequence of such notices the mosquito breeding places complained of were removed.

(c) A considerable number of water tanks and wells were stocked with fish. Also a great number of disused wells were covered or soiled.

(d) The following table shows the spleen rate during the year 1935 as compared with 1932, 1933, 1934:—

1932	1.2 per cent.	1934	0.8 per cent.
1933	1.05 „ „	1935	0.81 „ „

Disinfections.

12.—(a) 52 disinfections of houses and of the clothing in and contents of such houses wherein persons suffering from contagious or infectious diseases or consumption have died or ceases to live were carried out.

(b) 15 disinfections of second-hand articles intended for sale were carried out.

Abatement of Nuisances.

13.—(a) Notices have been served on five owners or occupiers of premises calling upon them to abate the nuisance caused thereon by the accumulation or deposit of filth or other refuse.

(b) Notices were also served on 310 owners or occupiers of premises with proper sanitary conveniences. Out of the 310 owners or occupiers, 270 have complied with the requirements of such notices.

Inspection of Food-Stuffs.

14.—(a) All Municipal Markets and Slaughter-houses were regularly inspected by the Municipal Health Officer.

(b) All premises in which food-stuffs or liquids were made or kept or exposed for sale, were regularly inspected by the Municipal Health Officer and the Municipal Sanitary Inspector.

(c) All food-stuffs or liquids found in the above markets, slaughter-houses or premises which in the opinion of the Municipal Health Officer were unfit for human consumption were seized and destroyed.

(d) The following table shows the quantity of food-stuffs seized and destroyed during the year 1935:—

Fresh fish	50 okes about.
Flour	200 „ „
Fresh Figs	400 „ „
Fresh meat	3 „ „
Carcasses of slaughtered animals for human consumption	1,272 „ „
Cheese (locally made)	40 „ „
Bread	400 „ „
Sausages	2 „ „

Vegetables, Fruits and Liquids :—A considerable quantity was seized and destroyed, the approximate quantity of which is as follows :—

Tomatoes	..	..	..	..	2,000	okes
Marrows	..	..	..	..	2,000	„
Cucumbers	..	..	..	..	1,000	pieces
Egg-plants	..	..	..	..	1,000	„
Potatoes	..	..	..	..	500	okes
Apricots	..	..	..	..	200	„
Cherries	..	..	..	..	150	„
Grapes..	..	..	..	..	200	„
Apples	..	..	..	..	250	„
Quinces	..	..	..	..	30	„
Fresh beans	..	..	..	..	200	„
Water melons	..	..	..	..	200	„
Various green vegetables	..	..	..	..	1,500	bundles.

Control of Infectious Diseases.

15. The Corporation with a view to preventing the infectious diseases proceeded with the following measures :—

(a) The hawking of vegetables and fruits liable to infection was absolutely prohibited.

(b) The sale of second-hand articles was strictly prohibited unless such articles were previously inspected by the Municipal Health Officer.

All second-hand articles which in the opinion of the Municipal Health Officer ought to be disinfected or destroyed were in fact disinfected or destroyed, as the case might be.

(c) No person employed in any bakery, slaughter-house or in the sale of fresh meat or pork was allowed to carry on his business unless he obtained a certificate from the Municipal Health Officer to the effect that his state of health and physical fitness were such as not to admit of the possible infection of the food-stuffs made, handled or sold by him.

140 certificates of this nature were given during the year 1935.

(d) A record is kept in the Municipal Offices by the Municipal Sanitary Inspector of all persons reported to be suffering of infectious diseases and no permit for the burial of any corpse is granted before each case is fully inquired into by the Municipal Health Officer or the Municipal Sanitary Inspector. If the person who died was suffering from any infectious disease then his house and the clothing or articles contained therein were properly disinfected or destroyed, as the case might require.

(e) All barber-shops, baths, coffee-houses, hotels, restaurants, pastry-shops, khans, taverns and other premises in which food-stuffs are made or exposed for sale were regularly inspected by the Municipal and Sanitary Staff in order to ascertain whether the articles used therein were clean and in good sanitary condition.

All articles used in barber-shops, such as razors, etc., should, according to the instructions of the Medical and Sanitary Staff, had been properly disinfected before use.

Other sanitary measures were suggested to and imposed on the owners of such premises as far as possible.

(f) The licensing of dogs was strictly enforced. 500 dogs were destroyed during the year 1935.

Control of Trade and Industries.

16.—(a) All factories were inspected by the Municipal, Medical and Sanitary Staff of the Corporation. In such cases the owners of such factories were forced to make certain alterations or improvements which were deemed necessary for the proper ventilation of such factories and generally for the protection of health of those working therein.

(b) No khan was licensed until the owner thereof complied fully with the sanitary requirements imposed by the Law or bye-laws or within the instructions of the Municipal Health Officer.

Prosecutions.

17. 386 Prosecutions were made, out of which 108 relate to sanitation and health.

APPENDIX L.

TABLE I.

Dr. E. A. Neff, <i>Senior Medical Officer.</i>
Dr. C. H. Cuff, <i>Surgical Specialist.</i>
Dr. R. Stuppel, <i>District Medical Officer, Famagusta.</i>
Dr. G. M. Gibbon, <i>District Medical Officer, Limassol.</i>
Dr. W. J. E. Phillips, <i>District Medical Officer, Nicosia.</i>
Dr. H. Symeonides, <i>Medical Officer, 1st Grade, Nicosia.</i>
Dr. G. M. Pietroni, <i>Medical Officer, 1st Grade, Larnaca.</i>
Dr. Th. Chr. Astreos, <i>Medical Officer, 1st Grade, Kyrenia.</i>
Dr. G. Atrides, <i>Medical Officer, 2nd Grade, Lefkoniko.</i>
Dr. J. S. Makrides, <i>Medical Officer, 2nd Grade, Polis.</i>
Dr. S. Constantinides, <i>Medical Officer, 2nd Grade, Paphos.</i>
Dr. C. Myrianthopoulos, <i>Medical Officer, 2nd Grade, Kellaki.</i>
Dr. P. A. Anastassiades, <i>Medical Officer, 2nd Grade, Pano Panayia.</i>
Dr. A. Josephakis, <i>Medical Officer, 2nd Grade, Vatili.</i>
Dr. J. Christodoulides, <i>Medical Officer, 2nd Grade, Limassol.</i>
Dr. E. Economides, <i>Medical Officer, 2nd Grade, Kophinou.</i>
Dr. Chr. Volos, <i>Medical Officer, 2nd Grade, Klirou.</i>
Dr. P. E. Demetriades, <i>Medical Officer, 2nd Grade, Larnaca.</i>
Dr. C. Rodosthenis, <i>Medical Officer, 2nd Grade, Pakhna.</i>
Dr. M. Liassides, <i>Medical Officer, 2nd Grade, Nicosia.</i>
Dr. Z. K. Zardis, <i>Medical Officer, 2nd Grade, Famagusta.</i>
Dr. C. S. Markides, <i>Medical Officer, 2nd Grade, Nicosia.</i>
Dr. P. Koumas, <i>Medical Officer, 2nd Grade, Famagusta.</i>
Dr. C. Kronides, <i>Medical Officer, 2nd Grade, Limassol.</i>
Dr. Hassan Atta Hikmet, <i>Medical Officer, 2nd Grade, Nicosia.</i>
Dr. Hassan Tahsin Salih, <i>Travelling Oculist.</i>
Dr. Mehmed Ali, <i>Travelling Oculist.</i>
Dr. Chr. Tornaritis, <i>Travelling Oculist.</i>
Miss F. M. E. Pepper, <i>Matron, Nicosia General Hospital.</i>
Miss A. Barclay, <i>Matron, Limassol Government Hospital.</i>
Miss C. A. Wyeth, <i>Matron, Sanatorium.</i>
Mrs. H. Hunter, <i>Matron, Leper Farm and Hospital.</i>
Miss M. C. CJSB Atkin, <i>Nursing Sister, Nicosia Government Hospital.</i>
Miss H. M. Mosrley, <i>Nursing Sister, Nicosia Government Hospital.</i>
Miss J. Rudge, <i>Nursing Sister, Nicosia Government Hospital.</i>
Miss D. Drew, <i>Nursing Sister, Nicosia Government Hospital.</i>
Miss L. Seymour, <i>Nursing Sister, Limassol Government Hospital.</i>
Miss E. Bishopp, <i>Nursing Sister, Limassol Government Hospital.</i>
Dr. S. G. Willimott, <i>Government Analyst.</i>
Dr. M. Gosden, <i>Government Bacteriologist.</i>
M. Aziz, <i>Chief Sanitary Inspector.</i>
Dr. S. Lysandrides, <i>Medical Superintendent, Mental Hospital.</i>
Dr. Chr. Kalavros, <i>Honorary Oculist, Nicosia Hospital.</i>
Dr. Chr. Tsiros, <i>Honorary Oculist, Larnaca Hospital.</i>
Dr. Chr. Makrides, <i>Honorary Oculist, Limassol Hospital.</i>
Dr. N. Michaelides, <i>Medical Officer, Venereal Clinics.</i>
Dr. M. J. Fterakis, <i>Medical Officer, Venereal Clinics.</i>
Dr. S. Pastides, <i>Medical Officer, Venereal Clinics.</i>
Dr. Eyioub Nedjmuddin, <i>School Medical Officer, Paphos.</i>
Mr. J. G. Marcellos, <i>Honorary Dentist, Nicosia and Kyrenia Hospitals.</i>
Mr. V. Diamantides, <i>Honorary Dentist, Larnaca Hospital.</i>
Mr. Y. P. Michaelides, <i>Honorary Dentist, Limassol Hospital.</i>
Mr. N. Savvides, <i>Honorary Dentist, Famagusta Hospital.</i>
Miss Stavroulla M. Georghiadou, <i>Honorary Dentist, Paphos Hospital.</i>
Dr. M. Coureas, <i>Honorary Consulting Physician, N'sia. Govt. Hospital.</i>
Dr. A. Gavrielides, <i>Honorary Consulting Surgeon, L'sol. Govt. Hospital.</i>
Dr. G. Christopoulos, <i>District Surgeon, Pedhoulas.</i>
Dr. C. Myrianthis, <i>District Surgeon, Perapedhi.</i>
Dr. M. Kontarinis, <i>District Surgeon, Lefka.</i>
Dr. Ch. Papaioannou, <i>District Surgeon, Nisou.</i>
Dr. C. Zachariades, <i>District Surgeon, Yialousa.</i>
Dr. A. Pavlides, <i>District Surgeon, Triкомо.</i>
Dr. E. Dikheos, <i>Honorary Radiologist, Larnaca Hospital.</i>

Dr. T. Evangelides, *Honorary Physician*, Sanatorium.
 Dr. P. Haji Eftychiou, *District Surgeon*, Athienou.
 Dr. Hamdi Rassim, *Honorary Radiologist*, Nicosia Hospital.
 Dr. D. L. Demetriou, *District Surgeon*, Agros.
 Dr. A. Malliotis, *District Surgeon*, Kelokedhara.
 Dr. N. Argyrides, *District Surgeon*, Myrtou.
 Dr. Halil Fikri, *District Surgeon*, Pyrgos.
 Dr. N. Stylianou, *District Surgeon*, Morphou.
 Dr. G. M. Avraamides, *District Surgeon*, Stroumbi.
 Hassan Shevket, *Clerk*, 2nd Grade.
 Minos X. Ioannides, *Clerk*, 2nd Grade.

APPENDIX M.

TABLE II.
FINANCIAL.
 MEDICAL DEPARTMENT.

EXPENDITURE, 1935.						£	s.	cp.
Personal Emoluments	..	..	..	..	..	22,958	0	2
Other Charges:—								
Wages:—								
Central Hospital, Nicosia	..	..	..	..	..	348	3	4
Sanatorium, Nicosia	..	..	..	..	..	134	17	4
Limassol Hospital	..	..	..	..	..	153	0	0
Mental Hospital	..	..	..	..	..	129	17	0
Leper Farm	..	..	..	..	..	369	19	0
Government Laboratories	..	..	..	..	..	102	0	0
Food, Clothing and Miscellaneous:—								
Central Hospital, Nicosia	..	..	..	..	..	2,132	4	2
Sanatorium, Nicosia	..	..	..	..	..	1,080	3	1
Limassol Hospital	..	..	..	..	..	866	10	5
Mental Hospital	..	..	..	..	..	1,785	3	0
Leper Farm	..	..	..	..	..	2,282	16	5
Drugs and Surgical Supplies	..	..	..	..	..	5,290	14	2
Surgical Appliances	..	..	..	..	..	14	11	0
Care of Healthy Children of Lepers	..	..	..	..	..	150	17	6
Extra Assistance:—								
Medical	..	..	..	..	..	1,669	5	7
Nursing	..	..	..	..	..	530	1	5
Prevention of Diseases	..	..	..	..	..	4,201	2	4
Disinfection	..	..	..	..	..	10	4	0
Rat Destruction	..	..	..	..	..	211	3	8
Midwifery	..	..	..	..	..	154	1	7
Venereal Clinics	..	..	..	..	..	1,337	14	7
Social Work	..	..	..	..	..	22	11	6
Chemical and Equipment of Laboratories	..	..	..	..	..	68	17	2
The Food and Drugs Law, 1926	..	..	..	..	..	18	7	3
Remuneration to Examiners in Pharmacy	..	..	..	..	..	15	0	0
Contributions:—								
Local State-aided Hospitals	..	..	..	..	..	2,100	0	0
Infant Welfare Centres	..	..	..	..	..	232	10	0
Other	..	..	..	..	..	216	0	0
Hospital Equipment	..	..	..	..	..	311	1	8
Allowances in lieu of Commission on Sale of Drugs	..	..	..	..	..	32	0	0
Books and Periodicals	..	..	..	..	..	55	15	4
Uniforms	..	..	..	..	..	214	0	6
Travelling	..	..	..	..	..	2,384	10	7
Rent	..	..	..	..	..	196	14	0
Lighting and Heating	..	..	..	..	..	417	16	4
Training of Medical Department Officials	..	..	..	..	..	143	4	7
Incidentals	..	..	..	..	..	95	7	5
Total	..	..	..	..	..	£29,478	9	2
Grand Total	..	..	..	..	..	£52,436	9	4

APPENDIX N.

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1935.

Diseases	IN-PATIENTS					OUT-PATIENTS	
	Remaining in Hospital at end of 1934	Yearly Total		Total Cases treated	Remaining in Hospital at end of 1935	Male	Female
		Admis- sions	Deaths				
I. EPIDEMIC, ENDEMIC, AND INFECTIOUS DISEASES.							
1. Enteric Group :—							
(a) Typhoid Fever	7	136	17	143	6	136	179
(b) Paratyphoid A.	—	4	—	4	—	2	1
(c) Paratyphoid B.	—	—	—	—	—	—	—
(d) Type not defined	—	—	—	—	—	—	3
2. Typhus	—	—	—	—	—	—	—
3. Relapsing Fever	—	—	—	—	—	1	1
4. Undulant Fever	—	—	—	—	—	—	—
5. Malaria :—							
(a) Tertian	4	660	4	664	11	7,939	6,887
(b) Quartan	—	2	—	2	—	526	326
(c) Aestivo-autumnal	—	68	—	68	—	345	293
(d) Cachexia	—	13	1	13	—	431	410
(e) Blackwater	—	—	—	—	—	8	5
6. Small-pox :—							
Alastrim	—	—	—	—	—	—	—
7. Measles	—	—	—	—	—	4	2
8. Scarlet Fever	—	2	—	2	—	3	2
9. Whooping Cough	—	5	—	5	—	681	609
10. Diphtheria	1	12	4	13	—	24	16
11. Influenza	4	50	—	54	—	2,677	1,892
12. Military Fever	—	—	—	—	—	—	—
13. Mumps	—	—	—	—	—	12	13
14. Cholera	—	—	—	—	—	—	—
15. Epidemic diarrhoea	—	—	—	—	—	13	9
16. Dysentery :—							
(a) Amoebic	—	2	—	2	—	57	29
(b) Bacillary	2	11	1	13	2	31	26
(c) Undefined or due to other causes	—	1	—	1	—	2	2
17. Plague :—							
(a) Bubonic	—	—	—	—	—	—	—
(b) Pneumonic	—	—	—	—	—	—	—
(c) Septicæmic	—	—	—	—	—	—	—
(d) Undefined	—	—	—	—	—	—	—
18. Yellow Fever	—	—	—	—	—	—	—
19. Spirochaetosis	—	—	—	—	—	16	5
Ictero-hæmorrhagica	—	—	—	—	—	—	—
20. Leprosy	—	—	—	—	—	4	6
21. Erysipelas	—	12	—	12	—	37	41
22. Acute Poliomyelitis	—	13	1	13	1	5	9
23. Encephalitis Lethargica	—	—	—	—	—	—	—
24. Epidemic Cerebro-spinal Fever	—	—	—	—	—	—	—
25. Other Epidemic Diseases :—							
(a) Rubella (German Measles)	—	—	—	—	—	1	—
(b) Varicella (Chicken-Pox)	—	1	—	1	—	116	110
(c) Kala-azar	—	1	—	1	—	—	—
(d) Phlebotomus Fever	—	—	—	—	—	—	—
(e) Dengue	—	—	—	—	—	—	—
(f) Epidemic Dropsy	—	—	—	—	—	—	—
(g) Yaws	—	—	—	—	—	—	—
(h) Trypanosomiasis	—	—	—	—	—	7	6
26. Glanders	—	—	—	—	—	17	6
27. Anthrax	—	9	1	9	—	13	10
28. Rabies	—	—	—	—	—	—	—
29. Tetanus	—	4	3	4	—	3	—
30. Mycosis	—	—	—	—	—	2	1
31. Tuberculosis, Pulmonary and Laryngeal	36	60	25	96	41	105	85
Carried forward	54	1,066	57	1,120	61	13,218	10,984

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1935.—*contd.*

Diseases	IN-PATIENTS					OUT-PATIENTS	
	Remaining in Hospital at end of 1934	Yearly Total		Total Cases treated	Remaining in Hospital at end of 1935	Male	Female
		Admis- sions	Deaths				
Brought forward	54	1,066	57	1,120	61	13,218	10,984
I. EPIDEMIC, ENDEMIC, AND INFECTIOUS DISEASES—<i>continued.</i>							
32. Tuberculosis of the Meninges or Central Nervous System ..	—	4	2	4	—	1	2
33. Tuberculosis of the Intestines or Peritoneum	—	9	1	9	—	19	26
34. Tuberculosis of the Vertebral Column ..	2	5	—	7	2	2	4
35. Tuberculosis of Bones and Joints ..	—	29	—	29	—	35	37
36. Tuberculosis of other organs :—							
(a) Skin or Subcutaneous Tissue (Lupus)	—	2	—	2	1	16	21
(b) Bones	—	3	—	3	—	2	2
(c) Lymphatic System	—	13	—	13	—	28	28
(d) Genito-urinary	—	—	—	—	—	—	—
(e) Other organs	—	—	—	—	—	2	7
37. Tuberculosis disseminated :—							
(a) Acute	—	—	—	—	—	—	2
(b) Chronic	—	—	—	—	—	1	1
38. Syphilis :—							
(a) Early	—	5	—	5	—	20	12
(b) Late	—	14	1	14	1	1	3
(c) Tertiary	—	1	—	1	—	4	2
(d) Hereditary	—	—	—	—	—	2	8
(e) Period not indicated	—	—	—	—	—	1	—
39. Soft Chancre	—	8	—	8	—	19	5
40. A.—Gonorrhœa & its complications ..	—	8	—	8	—	110	58
B.—Gonorrhœal Ophthalmia	—	—	—	—	—	16	12
C.—Gonorrhœal Arthritis	—	2	1	2	1	—	1
D.—Granuloma Venereum	—	—	—	—	—	—	—
41. Septicæmia	—	17	6	17	1	74	44
42. Other Infectious Diseases :—							
Trypanosomiasis	—	—	—	—	—	—	—
II. GENERAL DISEASES NOT MENTIONED ABOVE.							
43. Cancer or other malignant Tumours of the Buccal Cavity	1	29	1	30	2	6	7
44. Cancer or other malignant Tumours of the Stomach or Liver	—	12	2	12	1	27	7
45. Cancer or other malignant Tumours of the Peritoneum Intestines, Rectum	1	23	1	24	1	1	2
46. Cancer or other malignant Tumours of the Female Genital Organs ..	—	14	—	14	3	—	59
47. Cancer or other malignant Tumours of the Breast	—	19	—	19	—	—	4
48. Cancer or other malignant Tumours of the Skin	—	27	3	27	3	5	3
49. Cancer or other malignant Tumours of Organs not specified	—	10	—	10	1	26	40
50. Tumours non-malignant	—	32	—	32	1	51	66
51. Acute Rheumatism	2	67	—	69	3	501	800
52. Chronic Rheumatism	5	41	—	46	1	455	619
53. Scurvy (including Barlow's Disease) ..	—	—	—	—	—	—	—
54. Pellagra	—	—	—	—	—	—	—
55. Beri-Beri	—	—	—	—	—	—	—
56. Rickets	—	1	—	1	—	10	4
57. Diabetes (not including Insipidus) ..	—	5	2	5	—	28	32
58. Anæmia :—							
(a) Pernicious	1	39	1	40	3	546	877
(b) Other Anæmias & Chlorosis ..	—	17	—	17	—	927	1,525
Carried forward	66	1,522	78	1,588	86	16,154	15,304

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1935—*contd.*

Diseases	IN-PATIENTS					OUT-PATIENTS	
	Remaining in Hospital at end of 1934	Yearly Total		Total Cases treated	Remaining in Hospital at end of 1935	Male	Female
		Admis- sions	Deaths				
Brought forward	66	1,522	78	1,588	86	16,154	15,304
II. GENERAL DISEASES NOT MENTIONED ABOVE— <i>continued.</i>							
59. Diseases of the Pituitary Body ..	—	—	—	—	—	4	1
60. Diseases of the Thyroid Gland :—	—	—	—	—	—	2	7
(a) Exophthalmic Goitre ..	—	—	—	—	—	—	—
(b) Other diseases of the Thyroid Gland, Myxoedema ..	—	2	—	2	—	—	2
61. Diseases of the Para-Thyroid Glands ..	—	—	—	—	—	8	11
62. Diseases of the Thymus	—	—	—	—	—	—	1
63. Diseases of the Supra-Renal Glands ..	—	—	—	—	—	—	—
64. Diseases of the Spleen	—	10	—	10	—	207	184
65. Leukæmia :—	—	—	—	—	—	—	—
(a) Leukæmia	—	1	1	1	—	4	9
(b) Hodgkin's Disease	—	1	—	1	—	—	1
66. Alcoholism	—	—	—	—	—	5	—
67. Chronic poisoning by mineral sub- stances (lead, mercury, etc.) ..	—	—	—	—	—	4	2
68. Chronic poisoning by organic sub- stances (Morphia, Cocaine, etc.) ..	—	2	—	2	—	—	—
69. Other General Diseases :—	—	—	—	—	—	—	—
Auto-intoxication	—	—	—	—	—	1	14
Purpura Hæmorrhagica	—	3	2	3	—	3	21
Hæmophilia	—	—	—	—	—	1	1
Diabetes Insipidus	2	2	—	4	—	4	—
III. AFFECTIONS OF THE NERVOUS SYSTEM AND ORGANS OF THE SENSES.							
70. Encephalitis (not including Ence- phalitis Lethargica)	—	2	—	2	—	7	2
71. Meningitis (not including Tuber- culous Meningitis or Cerebro- spinal Meningitis)	—	7	3	7	—	2	1
72. Locomotor Ataxia	—	—	—	—	—	2	1
73. Other affections of the Spinal Cord ..	—	5	—	5	—	2	—
74. Apoplexy :—	—	—	—	—	—	—	—
(a) Hæmorrhage	—	9	3	9	—	9	10
(b) Embolism	—	—	—	—	—	—	—
(c) Thrombosis	—	2	—	2	—	2	1
75. Paralysis :—	—	—	—	—	—	—	—
(a) Hemiplegia	—	13	3	13	1	60	23
(b) Other Paralysis	1	4	1	5	—	28	9
76. General Paralysis of the Insane ..	—	—	—	—	—	4	1
77. Other forms of Mental Alienation ..	—	3	1	3	—	4	7
78. Epilepsy	—	6	1	6	—	145	71
79. Eclampsia, Convulsions (non-puer- peral) 5 years or over ..	—	—	—	—	—	1	—
80. Infantile Convulsions	—	—	—	—	—	5	2
81. Chorea	—	—	—	—	—	17	29
82. A.—Hysteria	—	24	—	24	—	45	443
B.—Neuritis	1	54	—	55	—	2,383	2,063
C.—Neurasthenia	—	13	—	13	—	437	445
83. Cerebral Softening	—	1	1	1	—	—	—
84. Other affections of the Nervous Sy- stem, such as Paralysis Agitans ..	—	1	—	1	—	126	116
85. Affections of the Organs of Vision :—	—	—	—	—	—	—	—
(a) Diseases of the eye	—	25	—	25	—	431	543
(b) Conjunctivitis	—	7	—	7	1	2,992	3,364
(c) Trachoma	—	9	—	9	—	3,840	3,995
(d) Tumours of the Eye	—	12	—	12	—	37	26
(e) Other affections of the Eye ..	2	50	—	52	—	862	1,225
86. Affections of the Ear or Mastoid Sinus	1	25	—	26	1	867	794
Carried forward	73	1,815	94	1,888	89	28,705	28,729

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1935—*contd.*

Diseases	IN-PATIENTS					OUT-PATIENTS	
	Remaining in Hospital at end of 1934	Yearly Total		Total Cases treated	Remaining in Hospital at end of 1935	Male	Female
		Admis- sions	Deaths				
Brought forward	73	1,815	94	1,888	89	28,705	28,729
IV. AFFECTIONS OF THE CIRCULATORY SYSTEM.							
87. Pericarditis	—	—	—	—	—	—	2
88. Acute Endocarditis or Myocarditis	—	31	8	31	1	85	106
89. Angina Pectoris	—	1	—	1	—	6	5
90. Other Diseases of the Heart :—							
(a) Valvular :—							
Mitral	—	11	3	11	1	44	72
Aortic	—	1	—	1	—	18	22
Tricuspid	—	3	—	3	—	1	—
Pulmonary	—	—	—	—	—	—	—
(b) Myocarditis	—	20	12	20	2	148	120
91. Diseases of the Arteries :—							
(a) Aneurism	—	—	—	—	—	15	28
(b) Arterio-Sclerosis	—	11	—	11	—	317	336
(c) Other diseases	—	—	—	—	—	1	2
92. Embolism or Thrombosis (non-cerebral)	—	—	—	—	—	—	—
93. Diseases of the Veins :—							
Hæmorrhoids	1	16	—	17	—	117	83
Varicose Veins	—	10	—	10	—	40	49
Phlebitis	—	—	—	—	—	5	7
94. Diseases of the Lymphatic System :—							
Lymphangitis	2	44	—	46	—	114	96
Lymphadenitis Bubo (non-specific)	—	17	—	17	—	71	84
95. Hæmorrhage of undetermined cause	2	8	—	10	1	50	33
96. Other affections of the Circulatory System	—	—	—	—	—	3	—
V. AFFECTIONS OF THE RESPIRATORY SYSTEM.							
97. Diseases of the Nasal Passages :—							
Adenoids	—	3	—	3	—	109	93
Polypus	—	13	—	13	1	36	36
Rhinitis	—	4	—	4	—	140	72
Coryza	—	8	—	8	—	708	489
98. Affections of the Larynx :—							
Laryngitis	—	7	1	7	—	86	69
99. Bronchitis :—							
(a) Acute	3	96	3	99	2	2,143	2,041
(b) Chronic	3	55	1	58	—	506	357
100. Broncho-Pneumonia	—	53	15	53	5	95	79
101. Pneumonia :—							
(a) Lobar	4	67	19	71	—	177	107
(b) Unclassified	—	5	1	5	—	2	3
102. Pleurisy, Empyema	2	58	4	60	1	67	78
103. Congestion of the Lungs	—	1	—	1	—	2	—
104. Gangrene of the Lungs	—	1	1	1	—	—	—
105. Asthma	2	11	3	13	—	232	198
106. Pulmonary Emphysema	—	—	—	—	—	2	—
107. Other affections of the Lungs :—							
Pulmonary Spirochaetosis	—	1	—	1	1	—	1
VI. DISEASES OF THE DIGESTIVE SYSTEM							
108. A.—Diseases of the Teeth or Gums	—	—	—	—	—	41	41
Caries, Pyorrhœa, etc.	—	5	—	5	—	813	998
B.—Other affections of the Mouth :—							
Stomatitis	—	2	—	2	—	453	542
Glossitis, etc.	—	—	—	—	—	32	21
Carried forward	92	2,378	165	2,470	104	35,384	34,999

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1935.—*contd.*

Diseases	IN-PATIENTS					OUT-PATIENTS	
	Remaining in Hospital at end of 1934	Yearly Total		Total Cases treated	Remaining in Hospital at end of 1935	Male	Female
		Admis- sions	Deaths				
Brought forward	92	2,378	165	2,470	104	35,384	34,999
VI. DISEASES OF THE DIGESTIVE SYSTEM— <i>continued.</i>							
109. Affections of the Pharynx or Tonsils :—							
Tonsillitis	—	50	—	50	—	649	699
Pharyngitis	—	1	—	1	—	60	59
110. Affections of the Oesophagus ..	1	1	—	2	—	4	3
111. A.—Ulcer of the Stomach	—	14	2	14	1	68	29
B.—Ulcer of the Duodenum ..	—	4	—	4	—	8	5
112. Other affections of the Stomach :—							
Gastritis	1	82	2	83	—	1,360	1,998
Dyspepsia, etc.	—	32	—	32	—	1,757	2,774
113. Diarrhoea and Enteritis :—							
Under two years	—	7	1	7	—	745	576
114. Diarrhoea and Enteritis :—							
Two years and over	2	74	1	76	1	1,124	1,079
Colitis	—	40	—	40	1	219	268
Ulceration	—	—	—	—	—	—	—
114a. Sprue	—	—	—	—	—	2	4
115. Ankylostomiasis	—	—	—	—	—	—	—
116. Diseases due to Intestinal Parasites:							
(a) Cestoda (Taenia)	—	1	—	1	—	18	38
(b) Trematoda (Flukes)	—	—	—	—	—	—	—
(c) Nematoda (other than Ankylostoma) :—							
Ascaris	—	—	—	—	—	115	114
Trichocephalus dispar ..	—	—	—	—	—	—	—
Trichina	—	2	—	2	—	3	—
Dracunculus	—	—	—	—	—	—	—
Strongylus	—	—	—	—	—	—	—
Oxyuris	—	—	—	—	—	90	133
(d) Coccidia	—	—	—	—	—	4	2
(e) Other parasites	—	—	—	—	—	—	—
(f) Unclassified	—	—	—	—	—	4	1
117. Appendicitis	11	307	1	318	6	247	345
118. Hernia	4	237	4	241	2	596	96
119. A.—Affections of the Anus Fistula, etc.	1	24	—	25	—	63	18
B.—Other affections of the Intestines :—							
Enteroptosis	—	10	3	10	—	7	25
Constipation	—	34	—	34	—	1,077	1,433
120. Acute Yellow Atrophy of the Liver ..	—	1	1	1	—	2	5
121. Hydatid of the Liver	3	16	1	19	1	12	25
122. Cirrhosis of the Liver :—							
(a) Alcoholic	—	6	1	6	—	11	3
(b) Other forms	—	—	—	—	—	4	2
123. Biliary Calculus	—	9	—	9	1	8	13
124. Other affections of the Liver :—							
Abscess	2	5	—	7	—	35	25
Hepatitis	—	15	1	15	—	73	79
Cholecystitis	—	20	—	20	—	21	49
Jaundice	—	12	3	12	—	47	54
125. Diseases of the Pancreas	—	2	—	2	—	1	1
126. Peritonitis (of unknown cause) ..	2	12	4	14	—	9	8
127. Other affections of the Digestive System	—	3	1	3	—	2	—
Carried forward	119	3,399	191	3,518	117	43,829	44,962

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1935—*contd.*

Diseases	IN-PATIENTS					OUT-PATIENTS	
	Remaining in Hospital at end of 1934	Yearly Total		Total Cases treated	Remaining in Hospital at end of 1935	Male	Female
		Admis- sions	Deaths				
Brought forward	119	3,399	191	3,518	117	43,829	44,962
VII. DISEASES OF THE GENITO-URINARY SYSTEM (NON-VENEREAL).							
128. Acute Nephritis	1	19	3	20	—	190	222
129. Chronic	2	30	1	32	1	78	90
130. A.—Chyluria	—	4	—	4	—	—	—
B.—Schistosomiasis	—	—	—	—	—	—	—
131. Other affections of the Kidneys :—							
Pyelitis, etc.	—	30	2	30	—	6	31
132. Urinary Calculus	—	6	—	6	1	33	37
133. Diseases of the Bladder :—							
Cystitis	—	22	2	22	—	154	164
134. Diseases of the Urethra :—							
(a) Stricture	1	17	2	18	3	38	11
(b) Other	—	9	1	9	—	12	6
135. Diseases of the Prostate :—							
Hypertrophy	—	1	—	1	—	7	—
Prostatitis	1	18	3	19	—	36	—
136. Diseases (non-Venereal) of the Ge- nital Organs of Man :—							
Epididymitis	1	21	—	22	—	30	—
Orchitis	—	15	—	15	—	56	—
Hydrocele	—	13	—	13	—	55	—
Ulcer of Penis	1	4	—	5	—	8	—
137. Cysts or other non-malignant Tumours of the Ovaries ..	—	17	1	17	1	—	21
138. Salpingitis :—							
Abscess of the Pelvis	—	52	2	52	2	—	73
139. Uterine Tumours (non-malignant)	2	39	1	41	—	—	56
140. Uterine Hæmorrhage (non-puer- peral)	1	47	1	48	—	—	338
141. A.—Metritis	2	86	—	88	2	—	455
B.—Other affections of the Female Genital Organs :—							
Displacements of Uterus ..	1	12	—	13	1	—	39
Amenorrhœa	—	2	—	2	—	—	107
Dysmenorrhœa	—	7	—	7	—	—	214
Leucorrhœa	—	—	—	—	—	—	10
142. Diseases of the Breast (non-puer- peral :—							
Mastitis	2	17	—	19	4	—	118
Abscess of Breast	2	13	—	15	3	—	19
VIII. PUERPERAL STATE.							
143. A.—Normal Labour	20	542	—	562	21	—	219
B.—Accidents of Pregnancy :—							
(a) Abortion	3	156	2	159	5	—	115
(b) Ectopic Gestation	—	2	1	2	—	—	6
(c) Other accidents of Pregnancy	1	33	1	34	1	—	231
144. Puerperal Hæmorrhage	—	11	1	11	—	—	11
145. Other accidents of Parturition ..	—	2	—	2	—	—	13
146. Puerperal Septicæmia	—	6	3	6	—	—	12
147. Phlegmasia Dolens	—	1	—	1	1	—	—
148. Puerperal Eclampsia	—	2	2	2	—	—	—
149. Sequelæ of Labour	—	1	—	1	—	—	2
150. Puerperal affections of the Breast	—	—	—	—	—	—	1
Carried forward	160	4,656	220	4,816	163	44,532	47,583

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1935—*contd.*

Diseases	IN-PATIENTS					OUT-PATIENTS	
	Remaining in Hospital at end of 1934	Yearly Total		Total Cases treated	Remaining in Hospital at end of 1935	Male	Female
		Admis- sions	Deaths				
Brought forward	160	4,656	220	4,816	163	44,532	47,583
IX. AFFECTIONS OF THE SKIN AND CELLULAR TISSUES.							
151. Gangrene	2	14	6	16	2	13	1
152. Boil :—							
Carbuncle	—	31	—	31	—	1,464	1,100
153. Abscess :—							
Whitlow	4	64	1	68	4	361	192
Cellulitis	4	165	2	169	6	630	346
154. A.—Tinea	—	15	—	15	—	320	241
B.—Scabies	2	12	—	14	—	1,129	831
155. Other Diseases of the Skin :—							
Erythema	—	8	—	8	—	383	203
Urticaria	1	2	—	3	—	128	112
Eczema	1	13	—	14	1	672	528
Herpes	—	5	—	5	—	116	80
Psoriasis	—	1	—	1	—	144	168
Elephantiasis	—	—	—	—	—	—	—
Myiasis	—	—	—	—	—	18	12
Chigoes	—	—	—	—	—	30	18
Cutaneous Leishmaniasis	—	—	—	—	—	—	—
X. DISEASES OF BONES AND ORGANS OF LOCOMOTION (OTHER THAN TUBERCULOUS).							
156. Diseases of Bones :—							
Osteitis	7	32	2	39	1	33	19
157. Diseases of Joints :—							
Arthritis	—	33	—	33	2	206	215
Synovitis	—	5	—	5	—	20	10
158. Other Diseases of Bones of Organs of Locomotion	1	17	—	18	3	367	253
XI. MALFORMATIONS.							
159. Malformations :—							
Hydrocephalus	—	—	—	—	—	3	1
Hypospadias	—	—	—	—	—	1	—
Spina Bifida, etc.	—	—	—	—	—	2	3
Other malformations	—	—	—	—	—	1	1
XII. DISEASES OF INFANCY.							
160. Congenital Debility	—	1	1	1	—	17	10
161. Premature Birth	—	1	1	1	—	—	2
162. Other affections of Infancy	—	—	—	—	—	2	—
163. Infant neglect (infants of three months or over)	—	—	—	—	—	2	—
XIII. AFFECTIONS OF OLD AGE.							
164. Senility :—							
Senile Dementia	—	—	—	—	—	1	3
XIV. AFFECTIONS PRODUCED BY EXTERNAL CAUSES.							
165. Suicide by Poisoning	—	—	—	—	—	—	—
166. Corrosive Poisoning (intentional)	—	1	—	1	—	—	1
167. Suicide by Gas Poisoning	—	—	—	—	—	—	—
168. Suicide by Hanging or Strangulation	—	—	—	—	—	2	—
169. Suicide by Drowning	—	—	—	—	—	1	1
170. Suicide by Firearms	—	—	—	—	—	2	—
171. Suicide by cutting or stabbing Instruments	—	—	—	—	—	—	—
172. Suicide by jumping from a height	—	—	—	—	—	—	2
173. Suicide by crushing	—	—	—	—	—	1	—
174. Other Suicides	—	—	—	—	—	1	—
Carried forward	182	5,076	233	5,258	182	50,602	51,936

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1935—*contd.*

Diseases	IN-PATIENTS					OUT-PATIENTS	
	Remaining in Hospital at end of 1934	Yearly Total		Total Cases treated	Remaining in Hospital at end of 1935	Male	Female
		Admis- sions	Deaths				
Brought forward	182	5,076	233	5,258	182	50,602	51,936
XIV. AFFECTIONS PRODUCED BY EXTERNAL CAUSES— <i>contd.</i>							
175. Food Poisoning :—							
Botulism	—	14	—	14	1	16	6
176. Attacks of poisonous animals :—							
Snake Bite	—	5	—	5	1	5	4
Insect Bite	—	3	—	3	—	17	14
177. Other accidental Poisonings	—	4	—	4	—	15	15
178. Burns (by Fire)	6	36	1	42	—	147	101
179. Burns (other than by Fire)	—	7	—	7	—	38	58
180. Suffocation (accidental)	—	—	—	—	—	1	4
181. Poisoning by Gas (accidental)	—	—	—	—	—	—	—
182. Drowning (accidental)	—	—	—	—	—	2	1
183. Wounds (by Firearms, war excepted)	2	4	—	6	2	6	—
184. Wounds (by cutting or stabbing Instruments)	5	255	—	260	3	1,785	627
185. Wounds (by fall)	1	81	—	82	1	802	358
186. Wounds (in Mines or Quarries)	—	—	—	—	—	5	2
187. Wounds (by Machinery)	—	3	—	3	—	17	4
188. Wounds (crushing, <i>e.g.</i> railway acci- dents, etc.)	—	4	—	4	—	26	13
189. Injuries inflicted by Animals, Bites, Kicks, etc.	4	8	—	12	—	309	101
190. Wounds inflicted on Active Service	—	—	—	—	—	—	—
191. Executions of civilians by belli- gerents	—	—	—	—	—	—	—
192. A.—Over fatigue	—	—	—	—	—	—	—
B.—Hunger or Thirst	—	—	—	—	—	—	—
193. Exposure to Cold, Frost bite, etc.	—	—	—	—	—	178	205
194. Exposure to Heat :—							
Heatstroke	—	—	—	—	—	—	—
Sunstroke	—	—	—	—	—	—	—
195. Lightning Stroke	—	—	—	—	—	1	—
196. Electric Shock	—	—	—	—	—	—	—
197. Murder by Firearms	—	—	—	—	—	4	2
198. Murder by cutting or stabbing Instruments	—	—	—	—	—	5	—
199. Murder by other means	—	—	—	—	—	1	1
200. Infanticide (Murder of an infant under one year)	—	—	—	—	—	—	1
201. A.—Dislocation	—	21	—	21	—	54	22
B.—Sprain	—	27	—	27	1	77	25
C.—Fracture	10	209	9	219	16	215	44
202. Other external Injuries	1	150	5	151	1	951	324
203. Deaths by Violence of unknown cause	—	—	—	—	—	5	3
XV. ILL-DEFINED DISEASES.							
204. Sudden Death (cause unknown) ..	—	—	—	—	—	3	2
205. A.—Diseases not already specified or ill-defined :—							
Ascites	1	20	1	21	—	48	33
Oedema	—	2	—	2	—	27	12
Asthenia	—	21	—	21	—	538	845
Shock	—	3	—	3	—	135	127
Hyperpyrexia	—	—	—	—	—	18	24
B.—Malingering	—	1	—	1	—	25	14
XVI. DISEASES, THE TOTAL OF WHICH HAVE NOT CAUSED TEN DEATHS							
TOTAL	212	5,954	249	6,166	208	55,078	54,928



