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**Contributors**

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Port Health Department.

I. Amount of Shipping Entering the Port during the

Year 1937. In all 3170 vessels (apart from those engaged in the fishing trade) arrived from foreign and coastwise, the tonnage amounting to 8,027,785. on the wharves or from the tanks of Four hundred and fifty six vessels were visited by the Medical Officers and 1,809 by the Inspector. 104 defects were found on 49 vessels and in most cases the defects were remedied while in Port. In cases where it was not possible for renovation and repairs to be carried out during the vessels' stay at Plymouth, a letter was sent to the Inspector at the next port of call in England notifying him of the details of our notice.

In all 5 letters were sent. Further details will be found in Table A.

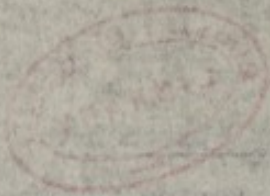
II. Character of Trade of Port.

Passenger Traffic The number of persons passing through the Port was over 33,256 including 15,363 aliens, the latter figure being made up in the main part by American tourists.

Cargo Traffic Coastwise. Coastwise cargo traffic consists largely of transhipped general cargoes from London, Liverpool and Glasgow, coal from the North East Ports, and coal and general goods from the Bristol Channel Ports.

Foreign. The foreign trade remained much the same as in previous years. Vessels arriving from infected ports were given immediate attention by officers of this Department. Table B (b) gives a list of the chief steamship companies and ports with which Plymouth has traded during the year 1937, and the nature of any cargo traded.

(11) Arrangements for the interment of the dead.  
(12) Other matters.  
All the above remain the same as set forth in the Annual Report for the year 1936.



### III. Source of Water Supply.

(a) For the Port.

● Great Western Docks.

Plymouth Corporation Water  
Department from hydrants  
on the wharves.

Cattedown & Sutton Harbour.

(b) For Shipping. The only water boat supplying fresh water to shipping in the Port is the Ela, of 5,500 gallons capacity.

(c) Number of Water Boats and Sanitary Condition. For shipping, water is derived from the hydrants on the wharves or from the Ela. The tanks of the Ela were inspected periodically throughout the year and were found to be in a wholesome condition.

### IV. Port Sanitary Regulations 1933.

(1) Arrangements for dealing with Declarations of Health.

(2) Boarding of vessels on Arrival.

(3) Notification of the Authority of inward vessels requiring Special Attention.

(4) Mooring stations designated under Article 10.

(5) Particulars of any standing exemptions from the provisions of Article 14.

(6) Experience of working of Article 16.

(7) Arrangements made for:-

(a) Premises and waiting-room for medical examination.

(b) Cleansing and disinfection of ships, persons and clothing and other articles.

(c) Premises for the temporary accommodation of persons for whom such accommodation is required for the purposes of the Regulations.

(d) Hospital accommodation available for Plague, Cholera, Yellow Fever, Smallpox and other infectious diseases.

(e) Ambulance transport.

(f) Supervision of contacts.

(8) Arrangements for the bacteriological or pathological examination of rats for plague.

(9) Arrangements for other bacteriological or pathological examinations.

(10) Arrangements for the diagnosis and treatment of venereal disease among sailors under the international arrangements.

(11) Arrangements for the interment of the dead.

(12) Other matters.

All the above remain the same as set forth in the Annual Report for the year 1933.

(a) For the Port.

(b) Great Western Dock.

(c) Redwood & Sutton Harbour.

Plymouth Corporation Water Department from hydrants on the wharves.

(d) For shipping. The only water boat supplying fresh water to

shipping in the Port is the M/S, of 5,800 gallons capacity.

(e) Number of Water Boats and Sanitary Condition. For shipping, water is derived from the hydrants on the wharves or from the M/S.

The tanks of the M/S were inspected periodically throughout the year and were found to be in a wholesome condition.

IV. Port Sanitary Regulations 1933.

(1) Arrangements for dealing with Declensions of Health.

(2) Boarding of vessels on arrival.

(3) Notification of the Authority of inward vessels requiring Special Attention.

(4) Mooring stations designated under Article 19.

(5) Particulars of any standing exemptions from the provisions of Article 14.

(6) Experience of working of Article 15.

(7) Arrangements made for:-

(a) Premises and waiting-rooms for medical examination.  
(b) Cleansing and disinfection of ships, persons and clothing and other articles.

(c) Premises for the temporary accommodation of persons for whom such accommodation is required for the purpose of the Regulations.

(d) Hospital accommodation available for Plague, Cholera, Yellow Fever, Smallpox and other infectious diseases.  
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(10) Arrangements for the diagnosis and treatment of venereal diseases among sailors under the international arrangements.

(11) Arrangements for the interment of the dead.

(12) Other matters.

All the above remain the same as set forth in the Annual Report for the year 1932.

CASES OF INFECTIOUS SICKNESS DEALT WITH  
DURING THE YEAR  
1927.

Medical Work under the Aliens Order 1920.	Number of Cases Investigated			Totals	
	Disposed of during voyage	Landed at Fly- mouth	Pro- ceeded in ship	Passengers	Crew
Scarlet Fever	6	-	1	7	-
Enteric Fever	7	-	4	3	8
Pneumonia	-	1	4	2	3
Dysentery	3	-	2	5	-
Erysipelas	-	-	3	1	2
Pulmonary Tuberculosis	1	11	36	46	2
Tuberculosis Other Forms	-	-	1	1	-
Malaria	1	-	12	3	10
Chicken Pox	9	1	5	11	4
Measles	7	-	11	17	1
Venereal Disease	4	-	29	11	22
Influenza	-	1	1	1	1
Mumps	2	1	6	8	1
Whooping Cough	-	-	3	3	-
Leprosy	-	-	1	1	-
	40	15	119	120	54

CASES OF INFECTIOUS DISEASES DEALT WITH  
DURING THE YEAR  
1937.

Disease	Number of Cases Investigated			Totals
	Disposed of during voyage	Landed as fit to work	Pro-ceeded in ship	
Bacterial Fever	8	-	1	9
Cholera	7	-	4	11
Dysentery	-	1	4	5
Scarlet Fever	3	-	2	5
Typhoid	-	-	2	2
Typhus	1	11	33	45
Other Typhus	-	-	1	1
Measles	1	-	12	13
Chicken Pox	2	1	8	11
Mumps	7	-	11	18
Veneral Disease	4	-	22	26
Leishmaniasis	-	1	1	2
Trachoma	2	1	6	9
Whooping Cough	-	-	2	2
Diphtheria	-	-	1	1
<b>Total</b>	<b>40</b>	<b>16</b>	<b>119</b>	<b>175</b>

V. Measures against Rodents.

- (1) Steps taken for the detection of rodent plague.
- (2) Measures taken to prevent the passage of rats between the ships and the shore.
- (3) Methods of deratisation of (a) ships, and (b) Premises in the vicinity of docks or quays.

Medical Work taken The number of aliens landed at this port under the Aliens Order and on shore. during the year was 15,363 in addition to (b) rat proofing. 72 alien seamen, all of whom were either 1920.

The measures medically examined or inspected: 161 were subjected to detailed examination for various reasons, but it was not necessary to refuse permission to land in any case.

Those staying over three months were treated as immigrants and subjected to more careful medical examination, so that no alien should be permitted to land, who, by reason of physical or mental infirmity might become a burden or charge on the community. and the ships were allowed to proceed for fumigation either at their home ports or next port of loading. In each case the appropriate authority was notified. The contractors' prices for fumigation appear to be relatively high at Plymouth and ships are reluctant to undergo fumigation because of the cost.

Further details will be found in Tables I to H.

These species of rodents were found on the ships, and the following measures were taken: (a) Deratisation of ships, (b) Deratisation of premises in the vicinity of docks or quays, (c) Deratisation of premises in the vicinity of the port, (d) Deratisation of premises in the vicinity of the port, (e) Deratisation of premises in the vicinity of the port, (f) Deratisation of premises in the vicinity of the port, (g) Deratisation of premises in the vicinity of the port, (h) Deratisation of premises in the vicinity of the port.

Species of Rat	7	23
Species of Mice	11	24
W. Woodrat	2	2
Species of Squirrels	1	1
Total	21	50



Medical Work  
under the  
Aliens Order  
1920.

The number of aliens landed at this port during the year was 15,363 in addition to 72 alien seamen, all of whom were either medically examined or inspected: 181 were subjected to detailed examination for various reasons, but it was not necessary to refuse permission to land in any case. Those staying over three months were treated as immigrants and subjected to more careful medical examination, so that no alien should be permitted to land, who, by reason of physical or mental infirmity might become a burden or charge on the community.

## V. Measures against Rodents.

- (1) Steps taken for the detection of rodent plague.
- (2) Measures taken to prevent the passage of rats between the ships and the shore.
- (3) Methods of deratisation of (a) Ships, and (b) Premises in the vicinity of docks or quays.
- (4) Measures taken for the detection of rat prevalence in ships and on shore.
- (5) Rat proofing.

The measures taken under all the above headings remain the same as set out in the Annual Report for the year 1933.

Plague Precautions were carried out on 82 vessels arriving from plague infected or suspected ports and suitable measures taken to prevent rats from leaving or gaining access to the ship.

1 Deratisation Certificate and 36 Deratisation Exemption Certificates were issued. In certain cases a month's extension was granted and the ships were allowed to proceed for fumigation either at their home ports or next port of loading. In each case the appropriate authority was notified. The contractors' prices for fumigation appear to be relatively high at Plymouth and ships are reluctant to undergo fumigation because of the cost.

Further details will be found in Tables E to H.

Three species of fleas were found on the ships, *Xenopsylla* (*Ceratophylla*), *Pulex*, *Xenopsylla cheopis*, and *Leishmania* (*Leishmania*).

(a) Infestation Statistics: Table I shows the total number of each species of flea found on each vessel with details of the investigation, together with the average number of fleas per rat. "F" denotes "number of fleas" and "F/R" denotes number of fleas per rat.

TABLE I

Species of flea	F	F/R
<i>X. cheopis</i>	171	2.8
<i>N. fasciatus</i>	392	3.8
<i>L. regalis</i>	79	1.3
Total fleas	642	9.9

Number of rats

- (1) Steps taken for the detection of rodent plague.
- (2) Measures taken to prevent the passage of rats between the ships and the shore.
- (3) Methods of deratization of (a) Ships, and (b) Premises in the vicinity of docks or quays.
- (4) Measures taken for the detection of rat prevalence in ships and on shore.
- (5) Rat proofing.

The measures taken under all the above headings remain the same as set out in the Annual Report for the year 1935.

Plague precautions were carried out on 82 vessels arriving from plague infected or suspected ports and suitable measures taken to prevent rats from leaving or gaining access to the ship.

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REPORT ON THE RAT-FLEAS OF PLYMOUTH

by R.B. Mayfield, M.D.  
(formerly Asst. M.O.H. Plymouth)

This investigation began in May 1935 and ended in May 1937.

The object was to gain some idea of the species and numbers of fleas harboured by the rats which inhabit the Plymouth docks.

The total number of rats examined for fleas was eighty three, seventy seven of these being caught on the docks and the remaining six in the town of Plymouth.

Technique

Only live rats, trapped singly, were used in this survey.

The cage containing the rat was placed in a white calico bag, and the whole enclosed in a wooden box together with a rag soaked in chloroform. After a suitable interval had elapsed, the bag containing the caged rat was removed from the box, and the fleas collected by thoroughly combing the rat and searching the bag.

Results.

(A) Rats Caught on Dock Premises.

The total number of rats investigated in this area was seventy seven, consisting of sixty three *Rattus norvegicus* and fourteen *Rattus rattus*. Two of the former species and one of the latter were immature specimens.

Three species of rat-flea were found on the docks, *Nosopsyllus* (*Ceratophyllus*) *fasciatus*, *Xenopsylla cheopis*, and *Leptopsylla segnis* (*musculi*).

(a) *Rattus norvegicus*. Table I shows the total numbers of each species of flea found on adult brown rats during the period of the investigation, together with the average numbers of fleas per rat. Here and subsequently "F" denotes "number of fleas", and "F/R" denotes number of fleas per rat.

TABLE I

Species of flea	F	F/R	
<i>X. cheopis</i>	171	2.8	
<i>N. fasciatus</i>	352	5.8	<u>Number of rats - 61</u>
<i>L. segnis</i>	79	1.3	
Total fleas	602	9.9	

REPORT ON THE RAT-FLIES ON PLYMOUTH

by H. B. Mayfield, M.D.  
(Formerly Asst. M.O.H. Plymouth)

This investigation began in May 1935 and ended in May 1937. The object was to gain some idea of the species and numbers of flies harbored by the rats which inhabit the Plymouth docks. The total number of rats examined for flies was eighty three; seventy seven of these being caught on the docks and the remaining six in the town of Plymouth.

Technique

Only live rats, trapped singly, were used in this survey. The cage containing the rat was placed in a white cloth bag, and the whole enclosed in a wooden box together with a rag soaked in chloroform. After a suitable interval had elapsed, the bag containing the caged rat was removed from the box, and the flies collected by thoroughly combing the rat and searching the bag.

Results

(A) Rat Caught on Dock Premises.  
The total number of rats investigated in this area was seventy seven, consisting of sixty three *Rattus norvegicus* and fourteen *Rattus rattus*. Two of the former species and one of the latter were immature specimens. Three species of rat-flies were found on the docks, *Mosquito* (*Ceratophyllus*) (*laevis*), *Xenophylla cheopis*, and *Leptopyllus agria* (*musculi*).

(a) *Rattus norvegicus*. Table I shows the total numbers of each species of flies found on adult brown rats during the period of the investigation, together with the average number of flies per rat. Here and subsequently "F" denotes "number of flies", and "F/R" denotes number of flies per rat.

TABLE I

Species of flies	F	F/R
<i>X. cheopis</i>	171	2.8
<i>M. laevis</i>	352	5.8
<i>L. agria</i>	79	1.3
Total flies	602	9.9

Table II shows the average numbers of fleas per rat in quarterly periods of the year, the rats dealt with here being the same as in Table I. It should be noted that the second quarter in 1935 does not include April, and the second quarter in 1937 does not include June.

TABLE II.

Species of Flea	1935			1936			1937		
	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd
<i>X. cheopis</i>	13.0	4.0	4.5	0.7	1.1	0.0	1.0	1.1	0.3
<i>N. fasciatus</i>	6.0	9.0	5.0	7.0	4.0	8.3	2.0	7.6	5.7
<i>L. segnis</i>	3.8	1.5	0.4	0.7	0.5	5.3	2.8	0.3	0.7
Total fleas	22.8	14.5	9.8	8.5	5.6	13.7	5.8	9.9	9.5
Number of rats	6	2	11	11	11	3	5	9	3

Table II does not reveal any seasonal variation in the numbers per rat of any of the three species of flea encountered, though this may be because the numbers of rats are too small. A noticeable feature is the sharp fall in the incidence of *X. cheopis*, but it must be borne in mind that the rat-flea population of a port is liable to sudden increases due to immigration.

It is interesting to note that 96% of the *X. cheopis* taken of brown rats on the docks came from a single grain warehouse, and the remaining 4% from within two hundred yards of these premises. This flea is not, of course, a native of this country, but is imported from warmer climates. It has been found plentifully in the Ports of Liverpool and Cardiff in recent years, at Bristol (1916), and at Guy's Hospital (1911). A single specimen was taken from a brown rat at Plymouth in 1905.

(b) Rattus rattus. The single immature *R. rattus* yielded one specimen of *N. fasciatus*. The gleanings from the thirteen adults are shown in Table III.

Table II shows the average numbers of lice per rat in quarterly periods of the year, the rats being the same as in Table I. It should be noted that the second quarter in 1935 does not include April, and the second quarter in 1937 does not include June.

TABLE II.

Species	1935				1937			
	Jan	Feb	Mar	Apr	Jan	Feb	Mar	Apr
<i>X. cheopis</i>	13.0	4.0	4.5	0.7	1.1	0.0	1.0	1.1
<i>R. leucis</i>	8.0	8.0	8.0	7.0	4.0	8.8	8.0	7.8
<i>L. segnis</i>	3.8	1.8	0.4	0.7	0.8	8.8	8.8	0.8
Total lice	24.8	14.8	13.8	8.8	6.8	18.7	8.8	9.8
Number of rats	8	8	11	11	11	8	8	8

Table II does not reveal any seasonal variation in the numbers per rat of any of the three species of lice encountered, though this may be because the numbers of rats are too small. A noticeable feature is the sharp fall in the incidence of *X. cheopis*, but it must be borne in mind that the rat-lice population of a port is liable to sudden increases due to immigration. It is interesting to note that 98% of the *X. cheopis* taken of brown rats on the docks came from a single grain warehouse, and the remaining 2% from within two hundred yards of these premises. This lice is not, of course, a native of this country, but is imported from warmer climates. It has been found plentifully in the ports of Liverpool and Cardiff in recent years, at Bristol (1918), and at Guy's Hospital (1911). A single specimen was taken from a brown rat at Plymouth in 1908.

(b) *Rattus rattus*. The single immature *R. rattus* yielded one specimen of *R. leucis*. The specimens from the thirteen adults are shown in Table III.

Table III.

Species	Number of lice
<i>X. cheopis</i>	1.0
<i>R. leucis</i>	1.0
<i>L. segnis</i>	1.0
Total lice	3.0

Oysters. As mentioned in the Annual Report for 1926 the survey of

TABLE III.

Species of flea	F	F/R
<i>X. cheopis</i>	7	0.5
<i>N. fasciatus</i>	50	3.9
<i>L. segnis</i>	25	1.9
Total fleas	82	6.3

Here again, the *X. cheopis* were all derived from the grain store mentioned above or its near neighbourhood.

(B) Rats Caught in the Town of Plymouth

Four *R. norvegicus* and two *R. rattus* were trapped in the town of Plymouth and examined for fleas. Between them they yielded thirty two specimens of *N. fasciatus* and three of *L. segnis*. None of these rats harboured *X. cheopis*.

Acknowledgement.

My best thanks are due to Professor P.A. Buxton of the London School of Hygiene and Tropical Medicine who very kindly checked the identifications of all the fleas collected in this survey.

The volume of water in this second tank (for treatment tank) is approximately 9,000 gallons. Oysters, previously freed from gross pollution by scrubbing, are placed in a single layer on special trays, lying eighteen inches from the bottom of the tank, for a period of ten days. The water is then run out of the tank and the oysters hoisted with "leap" water into the sedimentation tank (2) a further 9,000 gallons of "leap" water is transferred into the treatment tank (2) from the sedimentation tank (1) and the process repeated, making a total of four days treatment.

If the oyster treatment consisted of two periods of three days each but this was refused because it was found that the oysters did not function vigorously on the third day. Bacteriological examinations revealed no detriment following the reduction in time. Between two and four thousand oysters are treated in this way at a time, according to the requirements of the market.

The cleaned oysters are then placed in special storage tanks until required for market. Clean water from one of the sedimentation tanks is pumped into these tanks daily to a depth of eighteen inches.



TABLE III.

Species of flies	V	V/R
<i>X. chaopha</i>	7	0.8
<i>M. fasciatus</i>	80	3.9
<i>L. segnis</i>	82	1.9
Total flies	89	6.3

Here again, the *X. chaopha* were all derived from the grain store mentioned above or its near neighbourhood.

(B) Flies Caught in the Town of Plymouth

Four *M. norvegicus* and two *M. fasciatus* were trapped in the town of Plymouth and examined for flies. Between them they yielded thirty two specimens of *M. fasciatus* and three of *L. segnis*. None of these were harboured *X. chaopha*.

Acknowledgment.

My best thanks are due to Professor F.A. Dixon of the London School of Hygiene and Tropical Medicine who very kindly checked the identifications of all the flies collected in this survey.

Oysters. As mentioned in the Annual Report for 1936 the owner of the Yealm Oyster Fisheries has modified his tanks on lines suggested by this Department. Throughout the summer experiments were carried out in the newly constructed tanks in close collaboration with Professor Eyre, to whom we are indebted for the vast amount of bacteriological work he has undertaken and for his advice on numerous occasions.

The principle of the method used is that sea water will purify itself when allowed to sediment for ten to twelve days, and may then be regarded as "clean". The self-cleansing properties of the oysters are well known and if fed on clean water they will rapidly cleanse themselves.

There are three tanks arranged in parallel. The first tank (A) has a depth of 10 feet and is used for sedimentation purposes. Water is run in up to a depth of 8 ft. 6 inches - thus giving a volume of water of approximately 32,000 gallons. Water is allowed to sediment for ten to twelve days and then run into a second tank (B) to a depth of 3 feet. The volume of water in this second tank (for treatment tank) is approximately 9,000 gallons. Oysters, previously freed from gross pollution by scrubbing, are placed in a single layer on special trays, lying eighteen inches from the bottom of the tank, for a period of two days. The water is then run out of the tank and the oysters hosed with "clean" water from the sedimenting tank (A). A further 9,000 gallons of "clean" water are then transferred into the treatment tank (B) from the sedimentation tank (A) and the process repeated, making a total of four days treatment.

At the onset, treatment consisted of two periods of three days each, but this was reduced because it was found that the oysters did not function vigorously on the third day. Bacteriological examinations revealed no detriment following the reduction in time. Between two and four thousand oysters are treated in this way at a time, according to the requirements of the market.

The cleansed oysters are then placed in special storage tanks until required for market. Clean water from one of the sedimentation tanks is pumped into these tanks daily to a depth of eighteen inches.

As mentioned in the Annual Report for 1936 the owner of the Yacht Oyster Fisheries has modified his tanks on lines suggested by this Department. Throughout the summer experiments were carried out in the newly constructed tanks in close collaboration with Professor Byre, to whom we are indebted for the vast amount of bacteriological work he has undertaken and for his advice on numerous occasions.

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The cleaned oysters are then placed in special storage tanks until required for market. Clean water from one of the sedimentation tanks is pumped into these tanks daily to a depth of eighteen inches.

Oysters - Brightlingsea, Essex.  
Billingsgate Market, London.  
River Teal, Stear Point.

Clams and Scallops - Plymouth and Brixham, landed by Crawlers.  
The oysters are placed on special wooden trays, about nine

inches from the bottom of the tank. ending of the swimming season

3. The third tank (C) is a larger but shallower tank which is used as a second sedimentation tank. Water is run into here to a depth of five feet giving a volume of approximately 31,500 gallons, and treated in a similar way to that in tank (A). been kept between .1 and .4 parts By the use of two sedimentation tanks it is possible to have a continuous supply of "clean" sea water for purposes of purification.

Full attention is given to details of cleanliness and all tanks are scrubbed out before being refilled. sin. The results were

I am pleased to report that so far the method used has been successful and that bacteriological reports have all been very satisfactory throughout the oyster season 1937-1938. so various

Public Health (Shellfish) Regulations, 1934. falls from

Reference to the map on page surro will show that a large amount of untreated sewage is discharged into the Hamoaze and Hooe Lake.

Foodstuffs. A systematic inspection of foodstuffs landed in the Port. Unfortunately, a certain amount of shellfish (cockles, mussels, limpets and winkles) is collected from these places for sale, although the 20 tons of foodstuff were dealt with as being unsound trade is very small and purely local. Bacteriological examination and otherwise unfit for human consumption. Details are given in the of the water showed that the layings were polluted and the shellfish following table:-

were found to be unfit for human consumption. An order was made by

the Council under the Public Health (Cleansing of Shellfish)

Regulations, 1934 closing the following layings:- Hooe Lake;

The Hamoaze including West Mud; St. John's Lake; off Torpoint  
Institution; Weston Mill Lake; off Rat's Island; The Mouth of the  
St. Germans River; off Saltash; and in the River Tamar and its  
Tributaries. This order became operative on December 1st, 1937.

4. Shellfish sold in the City of Plymouth come from the following

sources:-

Grapes	10	0	0	To Refuse Dump		
Oranges	5	0	0	do		
Potatoes	15	0	0	do		
Cockles	-	King's Lynn.	0	0	0	For Pigs' Food
Limpets	-	Foreshore from Mount Batten to Wembury.				
Port Wrinkle,		Cornwall.				For Pigs' Food
Mussels	-	Padstow, Cornwall.				
Periwinkles	-	Foreshore from Mount Batten to Wembury.				
Port Wrinkle,		Cornwall.				
Padstow,		Cornwall.				

Two parcels of Apples were found to contain .021 and .035 grains arsenious oxide per pound. As the average permissible is .01 per pound, the apples in each case were returned to Liverpool under guarantee for reconditioning.

The systems are placed on special wooden trays, about nine inches from the bottom of the tank.

The third tank (C) is a larger but shallower tank which is used as a second sedimentation tank. Water is run into here to a depth of five feet giving a volume of approximately 21,500 gallons, and treated in a similar way to that in tank (A).

By the use of two sedimentation tanks it is possible to have a continuous supply of "clean" sea water for purposes of purification. Full attention is given to details of cleanliness and all tanks are scrubbed out before being refilled.

I am pleased to report that so far the method used has been successful and that bacteriological reports have all been very satisfactory throughout the year season 1937-1938.

Public Health (Shellfish) Regulations, 1934.

Reference to the map on page will show that a large amount

of untreated sewage is discharged into the Hamoze and Hooe Lakes. Unfortunately, a certain amount of shellfish (cockles, mussels, limpets and winkles) is collected from these places for sale, although the trade is very small and purely local. Bacteriological examination of the water showed that the layers were polluted and the shellfish were found to be unfit for human consumption. An order was made by

the Council under the Public Health (Classification of Shellfish)

Regulations, 1934 classifying the following layers:- Hooe Lake;

The Hamoze including West End; St. John's Lake; off Torpoint

Island; Weston Mill Lake; off Rat's Island; The Mouth of the

St. Germans River; off Salcote; and in the River Tamar and the

Tributaries. This order became operative on December 1st, 1937.

Shellfish sold in the City of Plymouth come from the following

Sources:-

- Cockles - King's Lynn.
- Limpets - Porspore from Mount Barton to Wembury.
- Port Winkle, Cornwall.
- Mussels - Padstow, Cornwall.
- Port Winkle, Cornwall.
- Port Winkle, Cornwall.
- Port Winkle, Cornwall.
- Port Winkle, Cornwall.

Oysters, - Brightlingsea, Essex.  
 Billingsgate Market, London.  
 River Yealm, Steer Point.

Qoens and Escallops - Plymouth and Brixham, landed by Trawlers.  
 Wheelks - Plymouth, Brixham and Torbay, landed by Trawlers.

Swimming - Tinside. Prior to the opening of the Swimming Season  
Pools

a Chlorination Plant was installed at the Tinside Swimming Pool. During the season 37 samples of water were taken for bacteriological examination and the results were satisfactory. The concentration of free chlorine has been kept between .1 and .4 parts per million, and there have been no serious complaints attributable to the presence of chlorine.

Mount Wise Swimming Baths. Thirteen samples were taken from No.1 basin and fifteen from No.2 basin. The results were satisfactory.

Other Swimming Places. Unfortunately, many of the sites favoured by bathers are situated in close proximity to various sewer outfalls. The map on page shows the sewer outfalls from the City which discharge into the surrounding sea and tidal rivers.

Foodstuffs. A systematic inspection of foodstuffs landed in the Port resulted in 755 vessels being visited in this connection, and nearly 39 tons of foodstuff were dealt with as being unsound, unwholesome, and otherwise unfit for human consumption. Details are given in the following table:-

FOODS CONDEMNED DURING THE YEAR, 1937.

<u>DIVISION</u>		T.	C.	Q.	LBS.	<u>DISPOSAL</u>
3. Apples	3 tins			1	9	To Incinerator
Apricots	1 tin				2	do
Apricot pulps	28 tins	3	2		0	do
Corned Beef	4 tins			1	0	do
Hams	32 tins	4	0		3	do
Pines	35 tins			1	24	do
Prunes	2 tins				10	do
Veal	38 tins	2	3		14	do
4. Apples			5	0	0	For Pigs' Food
Grapes			10	0	0	To Refuse Dump
Lemons			5	0	0	do
Oranges			15	0	0	do
Potatoes		35	0	0	0	For Pigs' Food
5. Wheat			19	2	0	For Pigs' Food
<u>TOTAL</u>		<u>38</u>	<u>6</u>	<u>0</u>	<u>6</u>	

Two parcels of Apples were found to contain .021 and .035 grains arsenious oxide per pound. As the average permissible is .01 per pound, the apples in each case were returned to Liverpool under Guarantee for reconditioning.



RECORDS OF VESSELS INSPECTED, TONNAGE, CREWS, PASSENGERS, SICKNESS, ETC., FOR THE  
TEN YEARS ENDED 1937.

Year	No. of Vessels Inspected	NATIONALITY		No. of Crews on Board	Registered Tonnage	Sickness		Passengers		Deaths	Landed for Treatment	INSANITARY	
		British	Foreign			During Voyage	Infectious	On Board	Landing			No. of Vessels	No. of Defects
1928	2,869	2,155	714	251,583	6,740,989	853	448	205,187	45,963	61	151	127	690
1929	2,261	1,781	480	248,119	6,565,530	1,224	636	213,395	47,471	71	134	103	633
1930	2,071	1,424	647	267,973	7,343,851	1,401	637	224,753	45,002	60	160	83	314
1931	1,940	1,363	577	225,010	6,612,552	1,321	776	180,265	54,744	60	106	55	212
1932	1,994	1,475	519	195,513	6,536,655	1,226	778	156,974	31,469	56	207	27	284
1933	2,032	1,542	540	215,172	6,609,646	702	394	120,915	28,264	55	65	13	94
1934	2,105	1,175	1,030	191,569	6,566,558	224	116	128,177	51,417	55	22	31	146
1935	1,980	1,445	535	154,777	5,403,953	333	276	110,963	34,634	52	14	45	183
1936	2,269	1,280	989	177,469	5,481,037	207	190	100,912	31,572	55	23	59	262
1937	2,265	1,686	579	215,373	5,755,941	187	174	107,001	33,256	50	15	49	104



1	8'309	1'888	848	812'845	9'422'847	784	144	103'007	22'818	20	12	106
2	8'505	1'880	860	144'482	9'481'024	806	180	101'818	27'845	22	27	808
3	1'880	1'442	820	174'444	9'432'822	222	530	110'802	24'074	26	14	782
4	8'102	1'132	1'020	121'208	9'380'220	254	110	158'143	21'414	29	23	792
5	8'025	1'442	240	378'443	9'808'842	102	244	150'812	29'804	22	29	84
6	1'814	1'442	270	182'412	9'428'022	1'880	148	120'812	21'408	22	20	824
7	1'870	1'202	844	252'070	9'218'252	1'201	140	180'202	24'442	20	20	812
8	8'041	1'484	824	202'842	1'241'821	1'401	224	252'482	49'028	20	22	214
9	8'621	1'481	430	248'118	9'002'020	1'334	220	212'202	41'431	17	124	822
10	8'921	2'122	174	291'222	9'140'200	222	448	202'121	42'822	21	121	852



1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 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