V

Louse Powder Test at Bidsa

Following the work at Esbe Rameses, it was apparent that a single application of MyL to the garments of a population will within three days reduce the number of active lice present almost to zero and that even after 15 days under conditions favoring reinfestation very few adult lice capable of laying eggs are to be found; that a second dusting with MyL was not followed by any immediately important amount of hatching of young forms. Although no figures are available for the degree of infestation necessary for the continued transmission of typhus under Egyptian conditions, it seemed reasonable to believe that the reduction gotten in Esbe Rameses was such as to cause an immediate cessation of typhus transmission, in so far as transmission may be due to louse activity as contrasted with infection from old fecal material already on the garments. It was therefore decided to attempt a village disinfestation under ~~condit~~ conditions which would possibly throw light on speed of control of typhus while at the same time giving necessary experience on mass application of powder.

On March first Birquat el Khaiam was visited because of the notification of 15 cases since Feb 22. Decision taken against this town of 2000 people because of preceding Krasene treatment to women's hair, shaving of men's heads and Serbian Barrel treatment to clothing of some 150 contacts.

Ex	46
NEG	3
1-5	14
LICE	45
AD	10
6-10	6
LICE	41
AD	14
10+	23
AD	36+23x10

Bidsa. On March 4th news came that 5 cases had just come into the Hospital at Baddreshin from Bidsa a village of 2250 persons lying some 38 kilometers south of Gizeh. Health Dept records fail to note previous outbreak of typhus in Bidsa during past 10 years.

March 4th. JCS, CMW, FLS and Assia drive to Bidsa: find Dr Edward with large flock of contacts and others all gathered outside of village. Begin dusting contacts in goat pen. 19 Persons dusted.

March 5th. Friday. Worked only in afternoon at Bidsa: 35 contacts dusted at Police station (JCS CMW FLS) 5 cases seen at Hospital, some quite typical of typhus. Another convalescent seen at Bidsa.

March 6th. 26 Contacts dusted. Arrangements made to dust village beginning March 9th at 3 stations. Governor of province visited Bidsa today at a critical time.

March 9th. JCS, CMW, FLS, separate stations each with 3 dusters at work: 1003 people dusted in 6 hours

March 10th JCS, CMW, FLS - Repeat performance - run out of business after 816 persons - surely 2250 population is inflated to get extra kerosene and sugar ration cards. No more suspect cases of typhus reported. Powder Stolen

March 13. Dusting of those missed and final count of contacts the nurse who powdered herself (one l and one adult found) and 46 persons supposedly unpowdered.

Examination by JCS CMW and Mahomet (FAI)

	Persons with (Pre Powder					Ex 46. Pos 43. HEAVY 10+=23
	0	1	2-5	6-10	10 +	LIGHT HEAVY 5+ = 27
LARVAE	7	1	~~15~~ 14	~~6~~ 5	19	46
ADULTS	10	8	10	6	12	99 Persons powdered today
NO LARVA	3	4	0	0	0 →	GIVES ADULT INFESTATION OF LARVA FREE PERSONS
NO ADULTS	3	1	5	1	0 →	GIVES LARVAL BURDEN OF ADULT FREE PERSONS.

Estimates follow of progress: Our Mahometo, the Thin, the Hairy and the Fat claim only 21 people remain unpowdered here. Seems probable that 99% of people sleeping in village have been dusted.

Contacts powdered 4,5,6th		80
General population	9	1003
" "	10	816
" "	13	99
		1998

The results of todays counts surely do not give fair idea of infestation at time work began here, 10 days ago. Much evidence of recent washing and some clothes seem to show effects of powder although owners deny all contact with powder. (A considerable amount of powder was stolen on the 10th from CMW and it seems that some of it has probably been used. Recent washing in fact may have been for purpose of concealing use of stolen powder) Of 46 persons examined 43 had lice and 44 had lice or nits. Two men found without nits claimed they washed their clothes daily in the canal. Five persons previously powdered ex today showed: Ex 5, 4 + x 2 one with 2 l and 2 adults and 2 c one adult each and one with one adult + one larva.)

POST POWDER COUNT.		EX	+ IN	WITH L	WITH A	TOTAL LICE
INTERVAL	8 DAYS	3	3	1	3	6
	4-5	2	1	1	1	2

Another point suggested by todays observations is that washing with soap apparently kills active forms but as done here does not necessarily kill all of eggs.

March 14. Sunday. JCO + CMW + Fir made all counts. Powder clothing of 17 people leaving theoretically only one person without Rx. Todays counts on 37 people previously powdered (mostly contacts) are disappointing in that there is still evidence of considerable breeding and some cases with both larvae and adults.

POST POWDER COUNT		EX	+	WITH LAR.	WITH BD.
INTERVAL	8 TO 10 DAYS	32	15	11	12
	4 DAYS	5	2	2	1

	8 to 10 Days Post Powder. PERSONS WITH						4 DAYS PERSONS WITH.					
	0	1	2-5	6-10	10+	TOTAL	0	1	2-5	6-10	10+	Tot.
LARVAE	21	2	4	0	5	32	3	0	0	0	2	5
ADULTS	20	7	4	0	1	32	4	1	0	0	0	5
NO LARVAE	17	3	1	0	0	21	3	0	0	0	0	3
NO ADULTS	17	1	1	0	1	20	3	0	0	0	1	4

Today's results were quite irregular and in some ways disappointing although the total reduction of louse burden was noticeable.

INTERVAL	EX	NEG	5+ L-ONLY	5+ A AND L	10+ L ONLY	10+ A AND L.
4 DAYS	5	3	1	1	1	1
10 DAYS	32	17	1	4	1	4

The above table is not clear as to what was intended. Of 32 people examined 8-10 days after Rx 17 were free of lice; 10 had from 1 to 5 less lice each with a total count of 26 lice, 10 adults and 16 larvae; 5 heavily infected persons had 10+ larvae each and had 0, 1, 2, 4, and 10+ adults respectively. This compares very favorably with the Esbe Rameses 10 day count (CMW) after first Rx there: Feb 17: Of 31 people examined, 11 were free of lice: 14 had not over 5 lice each with total of 28 lice (23 larvae, 5 adults); 3 had from 6 to 10 each with total of 27 lice (22 larvae, 5 adults); and 3 had 10+ larvae with 1, 1, 1 adults.

	BIDSA	ESBE RAMESES	
10 DAY COUNTS	32	5	31
NEGATIVE	17	3	11
1 TO 5	10	0	14
LICE	26	0	28
ADULTS	10	0	5
6 TO 10	0	0	3
LICE	0	0	27
ADULTS	0	0	5
10+	5	2	3
ADULTS	4	10+	3

although at first glance these results appear similar there is a difference in the behavior of adults: At ER only 18 adults were found whereas at Bidsa 17 were found in addition to one case in which no effect on either adults or larvae was noted. This case had been powdered as a contact on March 4th therefore was handled by [illegible] CMW.

The consideration of the 4 day results is even more disturbing: One of five ex had heavy larval breeding but no adults and one had heavy larval and adult infestation. (This man admitted not turning in all his clothes for powdering but even so he is recorded as powdered).

Analysis of Bidsa results to date indicates that results are very good in general but that slips are occurring: some cases fail to show marked effect of registered powdering.

March 16. Theoretically last person not powdered here came in today - count 10+ 10+ - powdered. FLS JCS CMW and M the Fat did counts on 36 contacts powdered on the 4, 5, 6th of March - 10 to 12 days ago.

	0	1	2-5	6-10	10+	TOTAL
c LARVAE	15	3	9	1	8	36
c ADULTS	23	7	6	0	0	36
c L & ADULTS	12	3	0	0	0	~~15~~ 15
c A & LARVAE	12	3	3	1	4	23

12 Day Counts Bidsa. Cf 10 Day counts Ramses + Bidsa Page 47.

Ex.	36
neg	12
1-5	11
Lice	26
Adults	6
6-10	5
Lice	31
Adults	8
10 +	8
Adults	6

COMMENTS ON COUNTS of 14th + 16. In gen the results of 10 day counts on the 14th were good; many cases negative, a few lightly infested and some heavily infested with larvae only. This is to be expected considering time interval and absence of ovicidal effect. However there were two cases, ~~Mans~~ AA. AMAR OC, a contact done by my group on tenth who came back 4 days later with a heavy infestation. ~~Ma~~ Adults not giving in trousers and turban for powdering. Two other cases, brothers (Wahhab Saad) had 10+ 4 and 10+10 each 10 days after Rx. Leaving out these three cases, counts of March 14th show excellent results. // Likewise on the 16th results were good with the exception of one case, a woman who was powdered

at her home on March 5 by the Bearded Thief of Bagdad. All heavy infestations except this one had three or less lice (adults) and after 10 or 11 days from first R. larvae are to be expected.

March 20th JCS CMW. Todays counts consisted of 13 contacts who should have been powdered on 4, 5, 6, ⇔ 13 persons from the general population and 11 persons in two families where typhus was occurring. (Some of these last two groups may have been powdered on the 9th and tenth some earlier).

10 to 16 DAY COUNTS BIDSA						
	0	1	2-5	6-10	10+	
WITH LARVAE	25	4	4	1	3	37
WITH ADULTS	25	5	5	1	2	37
WITHOUT LARVAE	20	3	1	1	0	25
WITHOUT ADULTS	20	1	2	1	1	25

Ex 37	
Neg 20	
1-5 11	
Lice 25	
Adults 13	
6-10 3	
Lice 19	
Adults 9	
10+ 3	
Adults 1 and 10+	

But analysis shows that one of 10+ (adults) customers had just returned from Hospital + had never been dusted although he was supposed to have been deloused at the hospital. The other must remain however as a failure since he is on the books as a customer of April March 9. One of the remaining two 10+ cases had 1 adult and larvae of all stages so breeding was continuing but the other had no adults and only large larvae all the same size.

Really only one serious failure recorded today Azab Sayed H. ⇒ 10+10+ powdered on March 9th. (Possibly also Orang #378 10+ 1 with all stages of larvae.)

On Mar 20, 14 patients and contacts were powdered (re-powdered by JCS in homes).

March 23rd. CMW + JCS work at 2 stations, JCS c 5 powderers 2 nurses, M-the Fat, "my dear Effendi", while CMW used 4 powderers two nurses, M-the Thin, M the Hairy, and the Omdah. 1280 persons powdered.

March 24th. Continuation yesterdays work: 610 persons done leaving 128 still to do.

March 27. JCS and CMW do louse counts on 24 persons powdered 3 and four days ago. supposedly all having been powdered twice since the 4th of March.

3+4 Day COUNTS	AFTER 2ND RX						EX	24
	0	1	2-5	6-10	10+	TOTAL	NEG	20
C LARVAE	21	2	1	0	0	24	1-5	4
C ADULTS	22	1	1	0	0	24	LICE	8
C LARVAE	20	1	0	0	0	21	ADULTS	3
C ADULTS	20	1	1	0	0	22	6-10	0
							LICE	0
							ADULTS	0
							10+	0
							ADULTS	0

Three additional persons were counted and entered in statistical reports. 1 woman powdered by Chief of Bagdad at home on Mar 6th (8-0) and two others not powdered since 3/14/3/16 43. (0-0) (5-4)

March 28. JCS and CMW did louse counts on 25 persons powdered on 23rd and 24th.

4+5 Day Counts after 2nd Rx							EX	25
	0	1	2-5	6-10	10+	TOT.	NEG	21
C LARVAE	22	1	1	1	0	25	1-5	3
C ADULTS	22	1	2	0	0	25	LICE	9
C LARVAE	21	0	1	0	0	22	ADULTS	5
C ADULTS	21	0	0	1	0	22	6-10	1
							LICE	7
							ADULTS	0
							10+	0
							ADULTS	0

	L	A
7 Day Count	0	0
17 Day Count	0	0
	0	0
	0	5
	0	10+
	10+	10+
	0	0

Also, on seven day count (0-0) and 6, 17 Day counts (0-0, 0-0 0-0, 0-5, 0-10, and 10+10+) were made. One patient just from hospital was counted and found free of lice making 33 in all as reported.

March 31 JCS and CMW did 7 and 8 day counts after second Rx on 37 persons, 3+4 day counts on 4 persons and 2 counts on two returned patients not previously examined nor powdered.

7+8 Day Counts after 2nd Rx							3+4 Day Counts.					
	0	1	2-5	6-10	10+	Total	0	1	2-5	6-10	10+	TOT
C LARVAE	30	1	4	1	1	37	3	0	0	0	1	4
C ADULTS	33	3	0	1	0	37	3	1	0	0	0	4
C Larvae	29	1	0	0	0	30	2	1	0	0	0	3
C Adults	29	1	2	0	1	33	2	0	0	0	0	1

These results are very good and merit special consideration since they show an almost complete lack of adults and little breeding of young

after 2nd Rx	7+8 Day	3+4 Day
Ex	34	4
Neg	29	2
1-5	6	∅
Lice	14	1
adults	3	1
6-10	1	0
Lice	14	0
Adults	8	0
10+	1	1
Adults	0	0

To have 8 adults in a single case is just too bad. (51) what happened in this case? only 3 persons with both larvae and adults.

April 1 1943 JCS and CMW do 8 and 9 day counts on 36 persons and one count on a returned patient.

8+9 DAYCOUNTS AFTER SECOND Rx

	0	1	2-5	6-10	10+	TOT.
WITH LARVAE	24	1	7	3	1	36
WITH ADULTS	29	4	3	0	0	36
WITHOUT LARVAE	23	0	∅	0	0	24
WITHOUT ADULTS	23	1	4	1	0	29

(24 - 1 - 7 - 3 - 1 = 36)

Ex	36
NEG	23
1-5	9
LICE	32
ADULTS	6
6-10	3
LICE	27
ADULTS	1
10+ ADULTS	1+

April 4th

12+13 DayCounts, After 2nd Rx

	0	1	2-5	6-10	10+	TOT
C L ARVAE	38	2	1	0	1	42
C ADULTS	37	3	2	0	1	42
Without L.	35	3	0	0	0	38
Without A.	35	2	0	0	37	37

Ex	42
NEG	35
1-5	5
Lice	5
AD	3
6-10	1
Lice	8
ad	4
10+ AD	1 10+

7 Day Counts

	0	1	2-5	6-10	10+	TOT
c L	7	1	0	0	0	8
c A	7	0	1	0	0	8
~~c~~ L	7	0	0	0	0	∅
~~c~~ A	7	0	0	0	0	∅

Ex	8
NEG	7
1-5	1
Lice	3
adults	2
6-10	0
L	0
a	0
10+	0
A	0

April 4 — 14+15 DAY COUNTS

	0	1	2-5	6-10	10+	TOT
C Lar.	33	4	5	2	1	45
C AD.	31	5	7	0	2	45
C LAR	26	3	4	0	0	33
C AD	26	3	2	0	0	31

Ex	45
NEG	26
1-5	14
ALL	26
AD	17
6-10	2
ALL	17
AD	7
10+	3
AD	30+

1 ten day count - 6+1

APRIL 10 - 17+18 DAY COUNTS

April 10 - 17+18 DAY COUNTS

	0	1	2-5	6-10	10+	TOT
C LARVAE	44	8	4	4	5	65
C ADULTS	42	3	10	5	5	65
C LARVAE	35	2	5	1	1	44
C ADULTS	35	6	0	1	0	42

Ex	65
Neg	35
1-5	15
All-L	28
Ad	18
6-10	6
All-L	22
AD	23
10+	9
AD	82+

April 14 - 21+22 day counts

	0	1	2-5	6-10	10+	Tot
C larvae	29	4	9	2	6	50
C adults	35	6	19	5	5	50
C larvae	14	5	10	0	0	29
C adults	14	0	1	0	0	15

Ex.	50
Neg	14
1-5	21
All L	52
Ad	46
6-10	5
All-L	40
Ad	21
10+	10
Ad	97+

April-17 - 24 + 25 day counts

	0	1	2-5	6-10	10+	Tot.
c larvae	8	3	9	3	10	33
c adults	9	5	4	5	10	33
C larvae	7	1	0	0	0	8
C adults	7	1	1	0	0	9

Ex.	33
Neg	7
1-5	8
All-L	20
Ad	7
6-10	3
All-L	26
Ad	7
10+	15
Ad	16?+

THIS WAS SPECIALLY 33 SELECTED GROUP! These WERE FAMILY GROUPS GOTTEN BY FOLLOWING UP INFESTED CHILDREN.

April-20 - 27 + 28 day counts

	0	1	2-5	6-10	10+	Tot.
c larvae	3	1	2	3	4	18
c adults	3	0	8	0	2	18
C larvae	3	0	0	0	0	3
C adults	3	0	0	0	0	3

Ex	18
Neg	3
1-5	2
All-L	9
Ad	5
6-10	2
All-L	18
Ad	8
10+	6
Ad	49+

April-21 28 - 29 day counts

	0	1	2-5	6-10	10+	Tot
c larvae	8	1	1	1	3	14
c adults	6	3	3	1	1	14
C larvae	5	2	1	0	0	8
C adults	5	0	0	1	0	6

Ex.	14
Neg	5
1-5	4
All-L	6
Ad	5
6-10	2
All-L	14
Ad	5
10+	3
Ad	24+

April-24 - one count

N	A
2	0

April-27 - 34+35 day counts

	0	1	2-5	6-10	10+	Tot
C larvae	15	4	11	6	12	48
C adults	14	5	22	2	5	48
C larvae	10	1	4	0	0	15
C adults	10	2	2	0	0	14

Ex	48
Neg	10
1-5	14
All-L	37
Ad	21
6-10	8
All-L	61
Ad	26
10+	16
Ad	121+

May-2. - 39+40 day counts

	0	1	2-5	6-10	10+	Tot.
C larvae	7	3	8	4	7	29
C adults	4	6	10	4	5	29
C larvae	2	3	1	1	0	7
C adults	2	1	1	0	0	4

Ex	29
Neg	2
1-5	10
All-L	21
Ad	12
6-10	6
All-L	43
Ad	26
10+	11
Ad	103+

	L	A
May 2 - one-8 day count -	16+	14+

May-3. - 40+41 day counts

	0	1	2-5	6-10	10+	Tot
C larvae	16	6	10	3	18	53
C adults	11	6	9	6	21	53
C larvae	10	2	3	1	0	16
C adults	10	0	1	0	0	11

Ex	53
Neg	10
1-5	14
All-L	36
Ad	22
6-10	6
All-L	45
Ad	26
10+	23
Ad	190+

	L	A
May 3 - one - 1 day count -	8	19
May 3 - one - 9 day count -	8	4

May-6 - 43 + 44 day counts

	0	1	2-5	6-10	10+	Tot.
c larvae	8	1	4	2	19	34
c adults	3	5	5	5	16	34
C larvae	3	3	2	0	0	8
C adults	3	0	0	0	0	3

Ex	34
Neg	3
1-5	7
All-L	19
Ad	14
6-10	3
All-L	27
Ad	14
10+	21
Ad	25+

May-8 - 45 + 46 day counts

	0	1	2-5	6-10	10+	Tot
c larvae	11	5	20	8	41	85
c adults	11	8	23	12	31	85
C larvae	6	2	3	0	0	11
C adults	6	3	0	0	2	11

Ex	85
Neg	6
1-5	18
All-L	51
Ad	25
6-10	9
All-L	69
Ad	36
10+	52
Ad	462+

Numbered Tin tests MYL

April 17-

	0	1	2-5	6-10	10+	Tot
clarvae	0	0	4	2	6	12
cadults	0	0	3	5	4	12
Clarvae	0	0	0	0	0	0
Cadults	0	0	0	0	0	0

Ex.	12
Neg	0
1-5	0
All L	0
Ad	0
6-10	3
L	30
Ad	11
10+	9
Ad	79+

April 20-

	0	1	2-5	6-10	10+	Tot
clarvae	4	0	2	2	4	12
cadults	4	2	2	3	1	12
Clarvae	4	0	0	0	0	4
Cadults	4	0	0	0	0	4

Ex	12
Neg	4
1-5	2
All L	8
Ad	2
6-10	2
All L	19
Ad	7
10+	4
Ad	31+

April 20-

April 21-

April 24-

	0	1	2-5	6-10	10+	Tot

Ex	
Neg	
1-5	
All L	
Ad	
6-10	
All L	
Ad	
10+	
Ad	

April 24-

See Report in Loose Leaf Book for further work.