REPORT NO. 74
July 15, 1968

NATIONAL
COMMUNICABLE DISEASE CENTER

SALMONELLA

SURVEILLANCE

CONTENTS. . .

FOR THE MONTH OF MAY 1968

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE
Bureau of Disease Prevention and Environmental Control

PREFACE

Summarized in this report is information received from State and City Health Departments, university and hospital laboratories, the National Animal Disease Laboratory (USDA, ARS), Ames, Iowa, and other pertinent sources, domestic and foreign. Much of the information is preliminary. It is intended primarily for the use of those with responsibility for disease control activities. Anyone desiring to quote this report should contact the original investigator for confirmation and interpretation.

Contributions to the Surveillance Report are most welcome. Please address

National Communicable Disease Center, Atlanta, Georgia 30333

Attention: Chief, Salmonellosis Unit, Epidemiology Program

National Communicable Disease Center ..... David J. Sencer, M.D., Director

Epidemiology Program ..... Alexander D. Langmuir, M.D., Chief

Bacterial Diseases Section ..... Philip S. Brachman, M.D., Chief
John V. Bennett, M.D., Deputy Chief

Salmonellosis Unit ..... Steven A. Schroeder, M.D., Chief
Bernard R. Aserkoff, M.D.

Statistics Section ..... Ida L. Sherman, M.S., Acting Chief
Richard C. Arnold, B.S.
Theodore P. Feury, Jr., M.S.

Veterinary Public Health Section ..... James H. Steele, D.V.M., Chief

Epidemic Aid Laboratories Section ..... Philip S. Brachman, M.D., Acting Chief

Veterinary Public Health Laboratory Unit ..... George K. Morris, Ph.D.

Collaborators

Laboratory Program
Bacteriology Section
Enteric Bacteriology Unit ..... William H. Ewing, Ph.D., Chief

July 15, 1968

TABLE OF CONTENTS

I. SUMMARY

In May 1968, 1,794 isolations of salmonellae were reported from humans, an average of 359 isolations per week (Tables I, II, and V-A). This number represents an increase of 61 (20.5 percent) over the weekly average of April 1968 and an increase of 1 (0.3 percent) over the weekly average of May 1967.

Reports of 853 nonhuman isolations of salmonellae were received during May 1968 (Tables III, IV, and V-B).

II. REPORTS OF ISOLATIONS

The ten most frequently reported serotypes during May:

	HUMAN			NONHUMAN		
	Serotype	Number	Percent	Rank Last Month	Serotype	Number	Percent
1	typhi-murium*	579	32.3	1	typhi-murium*	145	17.0
2	enteritidis	173	9.6	2	saint-paul	59	6.9
3	heidelberg	119	6.6	3	montevideo	57	6.7
4	saint-paul	101	5.6	5	anatum	52	6.1
5	newport	95	5.3	4	cerro	48	5.6
6	infantis	82	4.6	7	infantis	44	5.2
7	blockley	56	3.1	9	heidelberg	34	4.0
8	thompson	37	2.1	8	derby	31	3.6
9	typhi	32	1.8	6	senftenberg	30	3.5
10	derby	32	1.8	>10	eimsbuettel	26	3.0
	Total	1306	72.8		Total	526	61.7
	TOTAL (all serotypes)	1794			TOTAL (all serotypes)	853	
	*Includes var. copenhagen	37	2.1		*Includes var. copenhagen	19	2.2

Ten isolations of Salmonella bredeney were reported from Pennsylvania during May and represent continued follow-up of the outbreak due to contaminated turkey reported last month. A total of 17 isolations of S. indiana were reported from Georgia and were related to an outbreak of salmonellosis on a pediatric ward. Details of this outbreak will be presented in the next issue.

III. CURRENT INVESTIGATIONS

Salmonella javiana Alert!

During the month of June 1968, a marked increase in isolations of *Salmonella javiana* has been reported from 19 states throughout the United States. As shown in the table below, from January to May the average number of isolations of *S. javiana* was less than 4 per week; in June this average rose to 15.8 per week, and in the first week of July, 24 isolations were reported. For the comparable period in 1967, no such increase occurred. *S. javiana* is a salmonella serotype with a peculiar national distribution. Of 373 isolates in 1967, 78 percent were reported from five states, Texas, Florida, Louisiana, Arkansas, and Georgia, and none were reported in 23 states predominantly in the Northeast and West. No explanation for this distribution can be made, although several investigations have been pursued.

A cluster of 23 cases reported in June in California has been investigated by physicians of the California State Department of Public Health using detailed personal interviews. Of 21 cases in which onsets of illness could be determined, 16 occurred between June 7 and June 12. Symptoms were severe, and 9 persons were hospitalized as a result of their illness. Cases occurred in nine counties throughout the state. Most persons were in the middle and upper economic classes. There was no unusual age, sex, or race distribution and no common association to relate the cases. The epidemic curve suggested a common-vehicle outbreak, presumably a food item consumed within the home. However, no common vehicle could be identified.

The fact that cases have increased throughout the country suggests that a product with national distribution may be involved. The importance of immediate and persistent investigation cannot be overemphasized, particularly in states where *S. javiana* has not been common. From the experience of the investigation in California, it would appear that the vehicle involved is not one commonly associated with salmonellosis. Unfortunately, no significant nonhuman reservoir of *S. javiana* has been identified to guide an epidemiologic investigation of cases. Therefore, the list of potential vehicles must be extremely complete. Such a list has been prepared by the Salmonellosis Unit and may be used in the investigation. The Salmonellosis Unit is anxious to pursue this problem and will provide any support or assistance which might be needed. As additional information becomes available, we shall immediately disseminate it to all recipients of the Salmonella Surveillance Report.

Isolations of *Salmonella javiana*, 1968

Month	Total Isolations	Average No./Week
January	21	4.2
February	14	3.5
March	3	0.8
April	4	1.0
May	22	4.4
June	63	15.8

IV. REPORTS FROM THE STATES

NONE

V. SPECIAL REPORTS

Variability of Salmonella Recovery on Commercially Prepared Brilliant Green Agar

A. Variation in Plating Efficiency of Salmonellae on Eight Lots of Brilliant Green Agar. Abstract of an article by R. B. Read, Jr., and A. L. Reyes, Applied Microbiology 16:746-748, 1968.

The plating efficiency of Salmonella anatum, S. cubana, S. dublin, S. tennessee, and S. typhi-murium was determined for eight lots of brilliant green agar made by two manufacturers. Washed cells were used as an inoculum and incubated at 41.5° C on the brilliant green agar containing 12 mg/100 ml of sulfadiazine. Trypticase soy agar was used as a control to determine the number of salmonellae in the test suspension capable of growing in a nonselective medium. Of the eight lots of brilliant green agar tested, three did not differ significantly from the control; two lots gave salmonellae recoveries with geometric means about 25 percent lower than those of the control agar; and three gave recoveries as low as 0.02 percent of control.

B. Evaluation of Certain Recommended Techniques in Detecting Salmonellae. Excerpts from a paper presented by George K. Morris, Ph.D., Chief, Salmonella Laboratory Unit, Epidemiological Services Laboratory Section, Epidemiology Program, NCDC, at the Symposium on Laboratory Problems in Detecting Salmonellae, Ninth Biennial Veterinary Conference, National Communicable Disease Center, Atlanta, Georgia, May 8, 1968.

The efficiency of four lots of brilliant green agar from two manufacturers was evaluated. Tetrathionate broth cultures of 10 rectal swabs naturally contaminated with Salmonella typhi-murium were incubated at 37° C for 24 hours. Aliquots from the broth cultures were then inoculated on plates prepared from each of the four lots of brilliant green agar and incubated at 37° C for 24 hours. The diameters of three typical colonies of salmonellae on each plate were measured, giving a total of 30 colonies for each lot. The average diameters of colonies on each of the lots were 0.9 mm, 1.1 mm, 1.5 mm, and 0.5 mm, respectively. With a colony size of less than 1.0 mm, it is very difficult to pick salmonellae off a plate without picking from the surrounding agar other bacteria which have been suppressed but remain viable. Thus, of the four lots tested, one lot, which produced colonies with an average size of only 0.5 mm, was unsatisfactory for isolation of salmonellae.

EDITOR'S COMMENT: As demonstrated by these two reports, the variability in quality of commercially supplied brilliant green agar represents an important problem for everyone involved in the laboratory isolation of salmonellae. Variation in media may account for the difficulty laboratories occasionally experience in documenting salmonella contamination previously demonstrated in another laboratory. A need for improved quality control by the commercial suppliers is obvious.

VI. FOOD AND FEED SURVEILLANCE

NONE

TABLE I. COMMON SALMONELLAE REPORTED FROM HUMAN SOURCES, MAY, 1968

SEROTYPE	GEOGRAPHIC DIVISION AND REPORTING CENTER																														
	NEW ENGLAND						MIDDLE ATLANTIC					EAST NORTH CENTRAL					WEST NORTH CENTRAL							SOUTH ATLANTIC								
	ME	NH	VT	MAS	RI	CON	NYA	NYB	NYC	NJ	PA	OHI	IND	ILL	MIC	WIS	MIN	IOW	MO	ND	SD	NEB	KAN	DEL	MD	DC	VA	WVA	NC	SC	GA	FLA
anatum				9																			2		2						5
bareilly								1																							
blockley				1				2	5	3	4	4	1	2	4				3								2		2		5	5
braenderup													1						1												
bredeney				1						1	10	1		2	2																
chester									1						2				1						2						
cholerae-suis v kun											1																			1	
cubana								1																							
derby				2				2	3		1			2	1				1						3				3		1	
enteritidis			1	13		5		12	14	3	25	3		27	10	9			3	2				1	11	3	6				7	
give													2	1																	
heidelberg	1		1	9	2	2		3	9	4	8	9	1	7	6	2			2				1	1	16		2		4		7	1
indiana								1	1																4						17	
infantis	1			2	1	1		1	8	1	4	4		6	3	2								2	4		1		1		1	1
java									1					1			1		1										1		1	
javiana												1	1	3	3		1						1									3
litchfield								1	1		1			2	2				1													
livingstone											1												2									
manhattan									1		5	1			3									1							2	
miami																									1							1
mississippi																															2	1
montevideo				2					3		1	1											1		8						2	2
muenchen						1		2	1					3			1								2				1		1	1
newington																			1								1					
newport				4			1	19	15	1			2	6	5		3		2				1								2	8
oranienburg						2				1		1		2			1															6
panama				3							1			1				1														
paratyphi B				4				1																				1				
reading				1		1																										
saint-paul				4				5	1	9	9	6	2	6	12		1								8	1	4		3		3	5
san-diego				2										1																		
schwarzengrund											3			1																		
senftenberg										2	2					1																
tennessee	1													1	2	2									1		1				2	
thompson				1		3		3	3					1	2	2	1		4					1	3		3		3		2	
typhi						1	2					1		2					1				1		2				3		1	3
typhimurium	2			41	4	2	1	30	33	24	26	13	14	41	11	23	13	2	8				7	3	20	4	8	1	15	1	22	16
typhimurium v cop				14		1				7					4																	
weltevreden																																
worthington																																
TOTAL	5	–	2	113	7	19	4	84	100	56	102	45	24	118	72	41	22	3	29	2	–	–	16	9	87	8	28	2	36	1	79	59
ALL OTHER*	–	11	–	3	2	1	36	2	2	–	6	–	4	7	5	3	2	1	2	–	–	–	–	–	–	20	3	–	1	2	4	1
TOTAL	5	11	2	116	9	20	40	86	102	56	108	45	28	125	77	44	24	4	31	2	–	–	16	9	87	28	31	2	37	3	83	60

Note: NYA – New York, Albany; NYB – Beth Israel Hospital; NYC – New York City. Beth Israel Hospital laboratory is a reference laboratory and this month serotyped a total of 180 cultures.

* See Table II.

TABLE I – Continued

GEOGRAPHIC DIVISION AND REPORTING CENTER																				TOTAL	% OF TOTAL	CUMULATIVE TOTAL	% OF CUMULATIVE TOTAL	SEROTYPE
EAST S. CENTRAL				WEST S. CENTRAL				MOUNTAIN								PACIFIC								
KY	TEN	ALA	MIS	ARK	LA	OKL	TEX	MON	IDA	WYO	COL	NM	ARI	UTA	NEV	WAS	ORE	CAL	ALK	HAW				
					2						1		1					4		1	27	1.5	88	1.3	*anatum*
							1														2	0.1	21	0.3	*bareilly*
	1				2		2									1		7			56	3.1	188	2.8	*blockley*
																1					4	0.2	46	0.7	*braenderup*
				1	4													1		1	24	1.3	97	1.5	*bredeney*
																		1			7	0.4	23	0.3	*chester*
																					2	0.1	13	0.2	*cholerae-suis v kun*
																					1	0.1	23	0.3	*cubana*
							2				1			1			1	1		7	32	1.8	170	2.6	*derby*
	1	1			3		1				1			1				10			173	9.6	484	7.3	*enteritidis*
1					2		1											1			8	0.4	23	0.3	*give*
1	1	3			2		1	1					2				1	7		2	119	6.6	447	6.8	*heidelberg*
																					23	1.3	30	0.5	*indiana*
2	2	3			2	1	3		3		1		2	1				8		10	82	4.6	332	5.0	*infantis*
																		3			9	0.5	81	1.2	*java*
		1			2	1	4						1								22	1.2	64	1.0	*javiana*
1					1													1			11	0.6	30	0.5	*litchfield*
																		1		1	5	0.3	18	0.3	*livingstone*
							1									1		2			17	0.9	78	1.2	*manhattan*
																		2			4	0.2	23	0.3	*miami*
	1				2																6	0.3	10	0.2	*mississippi*
							2											3			25	1.4	79	1.2	*montevideo*
					1													2			16	0.9	60	0.9	*muenchen*
																					2	0.1	15	0.2	*newington*
		1		1	5	2	9				1		1					5		1	95	5.3	353	5.3	*newport*
						1		1			1							3			19	1.1	106	1.6	*oranienburg*
					1		3											2		2	14	0.8	72	1.1	*panama*
							1									2					9	0.5	46	0.7	*paratyphi B*
																					2	0.1	14	0.2	*reading*
		1			4		1				1					1	3	10		1	101	5.6	400	6.1	*saint-paul*
																2		4			9	0.5	45	0.7	*san-diego*
					1															1	6	0.3	15	0.2	*schwarzengrund*
							1														6	0.3	15	0.2	*senftenberg*
																		1			11	0.6	37	0.6	*tennessee*
		2			2													1			37	2.1	168	2.5	*thompson*
2				2		1	2					1					3	4			32	1.8	213	3.2	*typhi*
	1	5			6	20	31	1			1		3	4		11	6	63		5	542	30.2	1,794	27.2	*typhimurium*
					5				3								3				37	2.1	116	1.8	*typhimurium v cop*
																				9	9	0.5	40	0.6	*weltevreden*
											1										1	0.1	8	0.1	*worthington*
7	7	17	–	4	47	26	66	3	6	–	9	1	10	7	–	19	17	147	–	41	1,607	89.6	5,885	89.2	TOTAL
–	1	1	1	5	5	–	25	1	–	–	2	17	–	–	–	–	–	8	–	3	187		714		ALL OTHER*
7	8	18	1	9	52	26	91	4	6	–	11	18	10	7	–	19	17	155	–	44	1,794		6,599		TOTAL

TABLE II. OTHER SALMONELLAE REPORTED FROM HUMAN SOURCES, MAY, 1968

SEROTYPE	REPORTING CENTER																						
	ALA	ARK	CAL	COL	CON	DC	FLA	GA	HAW	ILL	IND	IOW	LA	MAS	MIC	MIN	MIS	MO	MON	NH	NM	NYA	NYB	NYC
alachua			1																					
atlanta								2																
binza																								
bradford												1												
california													1											
cerro							1		1	1														
cholerae-suis																							1	
concord																								
eimsbuettel													2											
gaminara													1											
gatow																								
habana																								1
hartford	1																							
kentucky																1							1	
lanka									1															
muenster																								
new-brunswick																								
norwich													1					2						
oslo			1						1															
paratyphi A			2												1									
paratyphi C			1																					
pensacola								1						2										
poona								1											1					
potsdam																								
rubislaw										5														
stanley			1																					
tallahassee														1										
urbana																1								
westhampton			1																					
willemstad																								
TOTAL	1	–	7	–	–	–	1	4	3	6	–	1	5	3	1	2	–	2	1	–	–	–	2	1
NOT TYPED*	–	5	1	2	1	20	–	–	–	1	4	–	–	–	4	–	1	–	–	11	17	36	–	1
TOTAL	**1**	**5**	**8**	**2**	**1**	**20**	**1**	**4**	**3**	**7**	**4**	**1**	**5**	**3**	**5**	**2**	**1**	**2**	**1**	**11**	**17**	**36**	**2**	**2**

* See Table V-A

TABLE II – Continued

REPORTING CENTER														TOTAL	CUMULATIVE TOTAL	SEROTYPE
NC	PA		RI	SC			TEN	TEX		VA	WIS					
														1	6	*alachua*
														2	2	*atlanta*
	1													1	3	*binza*
														1	1	*bradford*
														1	12	*california*
														3	4	*cerro*
														1	9	*cholerae-suis*
										1				1	1	*concord*
							1							3	4	*eimsbuettel*
														1	5	*gaminara*
								1						1	3	*gatow*
														1	6	*habana*
	2													3	8	*hartford*
														2	8	*kentucky*
														1	1	*lanka*
1														1	11	*muenster*
										1				1	1	*new-brunswick*
														3	4	*norwich*
	2													4	7	*oslo*
														3	8	*paratyphi A*
														1	1	*paratyphi C*
														3	3	*pensacola*
														2	12	*poona*
	1													1	1	*potsdam*
								1						6	10	*rubislaw*
														1	2	*stanley*
														1	2	*tallahassee*
											1			2	8	*urbana*
														1	2	*westhampton*
								1						1	1	*willemstad*
1	6		–	–			1	3		2	1			54	215	TOTAL
–	–		2	2			–	22		1	2			133	499	NOT TYPED*
1	6		2	2			1	25		3	3			187	714	TOTAL

Cumulative Totals include isolations of all serotypes (except those listed in Table I) reported this year.

TABLE III. COMMON SALMONELLAE REPORTED FROM NONHUMAN SOURCES, MAY, 1968

SEROTYPE	DOMESTIC ANIMALS AND THEIR ENVIRONMENT							ANIMAL FEEDS			
	CHICKENS	TURKEYS	SWINE	CATTLE	HORSES	OTHER	SUBTOTAL	TANKAGE	VEGETABLE PROTEIN	OTHER	SUBTOTAL
anatum	2	7	2			1	12	14			14
bareilly							—	1			1
blockley	11					1	12	7			7
braenderup		1					1	1			1
bredeney		1					1	5			5
chester		2					2				—
cholerae-suis v kun			8				8				—
cubana		1					1	4			4
derby		7	2	2	1	1	13	13		1	14
enteritidis	1					1	2	1			1
give	1						1	1			1
heidelberg	12	11	2			4	29	1			1
indiana							—				—
infantis	14	4	3			2	23	2			2
java							—				—
javiana							—				—
litchfield							—				—
livingstone	1						1	7			7
manhattan							—				—
miami							—				—
mississippi							—				—
montevideo	3	6	1			1	11	24		4	28
muenchen							—				—
newington		1					1	1			1
newport			4	1		3	8	1			1
oranienburg	3		1			1	5	4		5	9
panama			1			1	2				—
paratyphi B							—				—
reading							—	1			1
saint-paul	18	10	4			10	42				—
san-diego		4					4				—
schwarzengrund		5					5				—
senftenberg	1	5				2	8	14			14
tennessee		2				2	4	8		1	9
thompson	4						4	1		1	2
typhi							—				—
typhimurium	11	34	8	14	4	14	85	2			2
typhimurium v cop	7	6		2		2	17				—
weltevreden			1				1				—
worthington	2	2					4	4			4
TOTAL	91	109	37	19	5	46	307	117	—	12	129
ALL OTHER*	36	36	2	6	—	19	99	49	—	11	60
TOTAL	**127**	**145**	**39**	**25**	**5**	**65**	**406**	**166**	**—**	**23**	**189**

* See Table IV

TABLE III – Continued

WILD ANIMALS AND BIRDS	REPTILES AND ENVIRONMENT	HUMAN DIETARY ITEMS						MISCELLANEOUS	TOTAL	CUMULATIVE TOTAL	SEROTYPE
		EGGS AND PRODUCTS	POULTRY	RED MEAT	DAIRY PRODUCTS	OTHER	SUBTOTAL				
6		1		4	7	[illegible]	1[illegible]	[illegible]	52	297	*anatum*
							–		1	16	*bareilly*
1						2	2	3	25	71	*blockley*
							–		2	9	*braenderup*
							–	2	8	46	*bredeney*
							–		2	23	*chester*
							–		8	46	*cholerae-suis v kun*
					2	3	5	1	11	185	*cubana*
				1		1	2	2	31	108	*derby*
2							–		5	69	*enteritidis*
4							–	1	7	26	*give*
1						2	2	1	34	290	*heidelberg*
							–		–	4	*indiana*
1		4			2	6	12	6	44	158	*infantis*
							–		–	6	*java*
							–		–	4	*javiana*
							–		–	1	*litchfield*
							–		8	54	*livingstone*
							–	1	1	3	*manhattan*
							–		–	5	*miami*
							–		–	–	*mississippi*
		3			3	10	16	2	57	216	*montevideo*
	2						–	1	3	18	*muenchen*
					5	1	6		8	32	*newington*
4					1		1		14	80	*newport*
1		1			2		3	1	19	88	*oranienburg*
2	1					1	1	1	7	19	*panama*
	1						–		1	4	*paratyphi B*
							–		1	13	*reading*
1	1	1					1	14	59	194	*saint-paul*
							–	2	6	19	*san-diego*
							–		5	41	*schwarzengrund*
1		1			2	3	6	1	30	112	*senftenberg*
				1	7		8	1	22	81	*tennessee*
1	1	1					1	2	11	98	*thompson*
							–		–	–	*typhi*
7		[illegible]					2	30	[illegible]126	[illegible]452	*typhimurium*
2							–		19	108	*typhimurium v cop*
							–		2	4	*weltevreden*
		1			1		–		10	[illegible]2	*worthington*
34	6	15	–	6	32	32	85	78	639	3,052	TOTAL
8	3	[illegible]	–	2	[illegible]	3	17	27	214	819	ALL OTHER*
42	9	22	–	8	37	35	102	105	853	3,871	TOTAL

TABLE IV. OTHER SALMONELLAE REPORTED FROM NONHUMAN SOURCES, MAY, 1968

SEROTYPE	DOMESTIC ANIMALS AND THEIR ENVIRONMENT							ANIMAL FEEDS			
	CHICKENS	TURKEYS	SWINE	CATTLE	HORSES	OTHER	SUBTOTAL	TANKAGE	VEGETABLE PROTEIN	OTHER	SUBTOTAL
alachua							–	4			4
bern							–				–
binza							–	2			2
bornum	8						8				–
california			1				1	3		1	4
cerro		18				5	23	4		3	7
concord	1						1				–
dublin			1	6			7				–
eimsbuettel	2						2	17		4	21
gaminara		1					1				–
kentucky	4	3					7	3			3
lexington							–	1			1
madelia							–				–
manila	1						1	1		1	2
minneapolis		1					1	1			1
minnesota	2	10				5	17	2			2
monschaui							–				–
new-brunswick							–				–
orion		1					1	2			2
pomona							–				–
pullorum	14					1	15				–
rubislaw							–				–
siegburg	4	1					5	1			1
taksony						1	1				–
thomasville						6	6	1		2	3
urbana							–				–
TOTAL	36	35	2	6	–	18	97	42	–	11	53
NOT TYPED*	–	1	–	–	–	1	2	7	–	–	7
TOTAL	36	36	2	6	–	19	99	49	–	11	60

*See Table V-B

TABLE IV – Continued

WILD ANIMALS AND BIRDS	REPTILES AND ENVIRONMENT	HUMAN DIETARY ITEMS						MISCELLANEOUS	TOTAL	CUMULATIVE TOTAL	SEROTYPE
		EGGS AND PRODUCTS	POULTRY	RED MEAT	DAIRY PRODUCTS	OTHER	SUBTOTAL				
		1					1	2	7	23	*alachua*
1							–		1	1	*bern*
					1	1	2		4	40	*binza*
							–		8	9	*bornum*
					1		1	1	7	39	*california*
		3					3	15	48	90	*cerro*
							–		1	1	*concord*
							–		7	17	*dublin*
					1	1	2	1	26	117	*eimsbuettel*
							–		1	2	*gaminara*
				1			1		11	64	*kentucky*
					2		2		3	17	*lexington*
	1						–	1	2	2	*madelia*
							–		3	9	*manila*
							–		2	2	*minneapolis*
							–	5	24	60	*minnesota*
1							–		1	1	*monschaui*
2							–		2	6	*new-brunswick*
							–		3	10	*orion*
	1						–		1	4	*pomona*
							–	1	16	32	*pullorum*
3							–		3	17	*rubislaw*
				1			1		7	26	*siegburg*
							–		1	5	*taksony*
							–	1	10	39	*thomasville*
	1						–		1	7	*urbana*
7	3	4	–	2	5	2	13	27	200	782	TOTAL
1	–	3	–	–	–	1	4	–	14	37	NOT TYPED*
8	3	7	–	2	5	3	17	27	214	819	TOTAL

TABLE V. SALMONELLAE REPORTED BY GROUP IDENTIFICATION ONLY, MAY, 1968

A. HUMAN SOURCES

REPORTING CENTER	GROUP														TOTAL
	B		C	C_1	C_2		D		E			O		UNK	
ARKANSAS	2			1			1		1						5
CALIFORNIA														1	1
COLORADO														2	2
CONNECTICUT	1														1
D.C.	12				1		3							4	20
ILLINOIS												1			1
INDIANA	3						1								4
MICHIGAN	4														4
MISSISSIPPI	1														1
NEW HAMPSHIRE	9			2											11
NEW MEXICO	12			3	2										17
NEW YORK – A														36	36
NEW YORK – C	1														1
RHODE ISLAND	1		1												2
SOUTH CAROLINA	1													1	2
TEXAS	5			1			4							12	22
VIRGINIA	1														1
WISCONSIN														2	2
TOTAL	53		1	7	3		9		1			1		58	133
														Virgin Islands	1

B. NONHUMAN SOURCES

SOURCES	GROUP														TOTAL
	B		C	C_1	C_2		D		E			O		UNK	
DOMESTIC ANIMALS AND THEIR ENVIRONMENT	1													1	2
ANIMAL FEEDS														7	7
WILD ANIMALS AND BIRDS														1	1
REPTILES AND ENVIRONMENT															–
HUMAN DIETARY ITEMS	1													3	4
MISCELLANEOUS															–
TOTAL	2		–	–	–		–		–			–		12	14