REPORT NO. 88
September 15, 19

NATIONAL
COMMUNICABLE DISEASE CENTER

SALMONELLA

SURVEILLANCE

CONTENTS. . .

FOR THE MONTH OF JULY 1969

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

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III. CURRENT INVESTIGATIONS

NONE

IV. REPORTS FROM THE STATES

NONE

V. SPECIAL REPORTS

NONE

VI. INTERNATIONAL

Salmonellosis in Belgium

During the year 1968, there were a total of 3,876 human isolations of salmonellae in Belgium. This represented a slight increase from the sum of 3,702 isolations during the preceding year. Fifty-four different serotypes were identified; Salmonella typhi-murium accounted for 2,532 isolates or 65.3 percent of the total. Salmonella panama, for the sixth consecutive year, was the second most common serotype with 577 isolates (14.9 percent). This in turn was followed by S. brandenburg with 214 isolates (5.5 percent); S. infantis with 151 isolates (3.9 percent); and S. bovis-morbificans with 50 isolates (1.3 percent). These five most common serotypes accounted for 3,524 isolates or 91 percent of the total for the year. The other 352 cultures were divided among 49 serotypes, none of which accounted for more than one percent of the total isolations.

Nine serotypes, including S. cerro, S. elisabethville, S. glostrup, S. madelia, S. mishmar-haemek, S. nairobi, S. ness-ziona, S. riggil, and S. tarshyne, were isolated for the first time in Belgium. Foreign travel to Africa was frequently associated with these new isolations.

Salmonella typhi was isolated on 16 occasions. Nearly all of these isolates were obtained from individuals who had traveled to southern Europe or North Africa shortly prior to the onset of their illness.

During the year no major outbreaks of salmonellosis were reported. Rather, the disease seemed to be limited to intrafamily spread. The most important of these included eight members of a family infected with S. menston.

During the latter half of 1968, there was an increase in the incidence of isolations of S. infantis from several regions of the country. The reason for this increase was not elucidated

S. typhi-murium including var. copenhagen continued to be the most frequently isolated serotype from animals or animal products. Thirty-nine other serotypes were recovered; none accounted for more than a few isolations, however.

Figure 1 REPORTED HUMAN ISOLATIONS OF SALMONELLAE, UNITED STATES 1965 - 1969

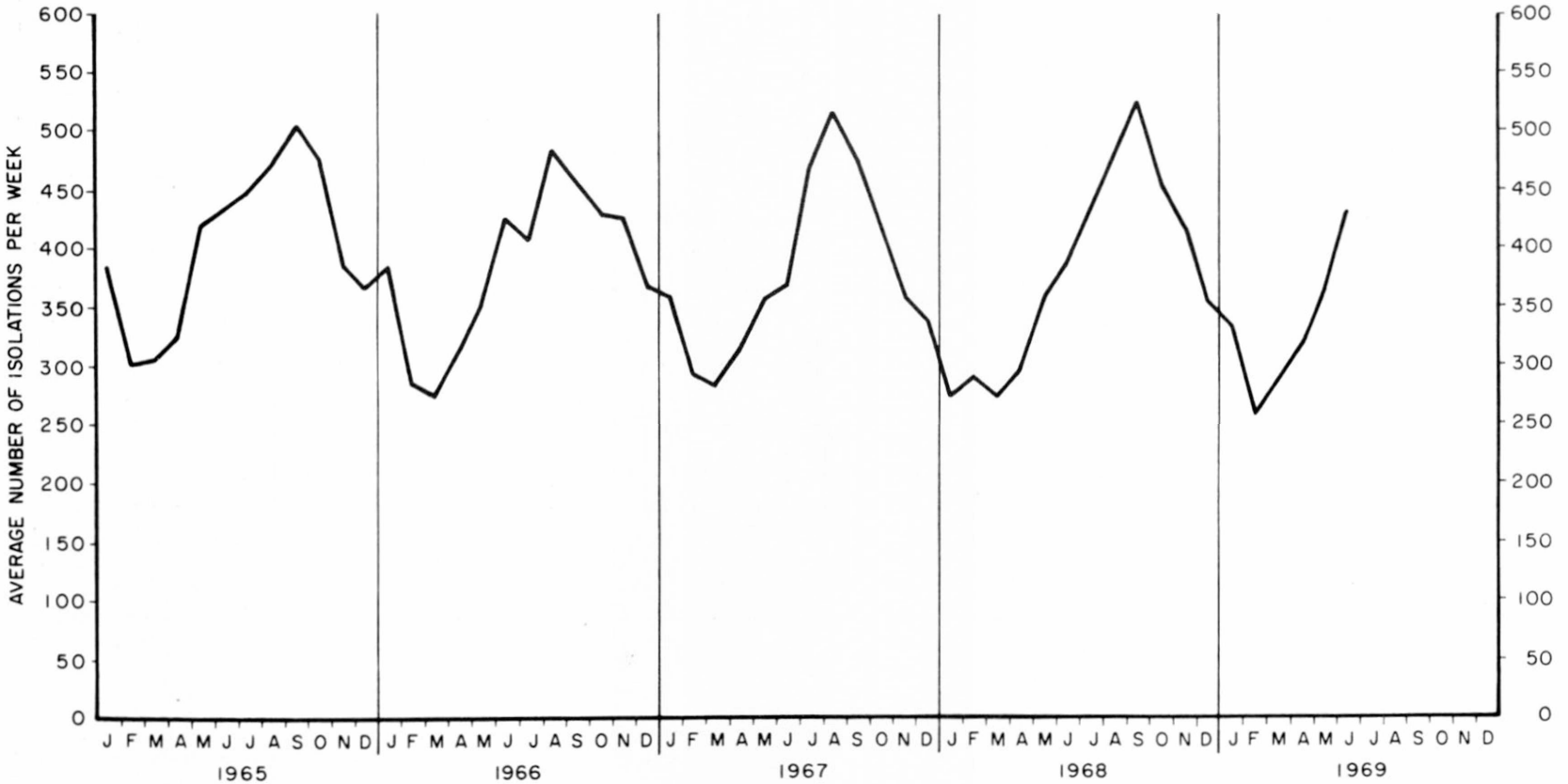

TABLE I. COMMON SALMONELLAE REPORTED FROM HUMAN SOURCES, JULY 1969

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																									1		1				1	1
bareilly															3			1						2								1
blockley			1	3		1		1	1	2	4	2			2	1	1	1		1				1		1					2	
braenderup				5					1										1												1	
bredeney									2					2					1				1		5			2			1
chester																	1										1					
cholerae-suis v kun						1									1												1					
cubana				7							1	1		2	1												3				1	1
derby									2		3	1		2																		
enteritidis			13	45	1	3		2	15	8	14	3	2	17	5	3	3		4				2	1	3		3		2		9	3
give										2	1			2										1			1					
heidelberg	1		1	16		8		7	9	7	5	2	5	8	3	4	1			1			1	1	5	1	4		5		6	1
indiana								2			1			2																	5	
infantis			1	7		13		2		3	4	2	5	7	2	5	1		2				1		4		6				2	4
java														5					1												1	7
javiana				1								1		3											1		2				9	8
litchfield						2					3			2							1				1						1	1
livingstone																			1													
manhattan									1		1			1	3	1	1	1							1						3	2
miami						1		1																								5
mississippi																															2	
montevideo				10		1			1		2	1	2	2		1			1						1				1		2	
muenchen								1			1	2			1	2				1										2	4
newington														1																		
newport				2	2			2	3	2	3	9	1	12	3	10		5	1	1			1	1	2		4		9		8	21
oranienburg									1	1	2			1		1	1				2										3	
panama						1					10				4	1																
paratyphi B				3			1	1				2			2										2							2
reading						1								1																	1	
saint-paul			1	9		4		1	7	8	2		1	6	5	10	1		2				1	1	3		2		2		5	10
san-diego															1	2																
schwarzengrund													5														1				1	
senftenberg				3																								1			2	
tennessee										1				1	1																1	
thompson	1			14			1		2	3		1		6	1	1	1						1	1	4		2		3		3	3
typhi				1		1			1		1	3		7											1				4			5
typhimurium	2		7	58	5	17		4	27	23	58	28	14	32	43	26	11	4	9	1		3	3	2	23		17		10		23	14
typhimurium v cop				5		4				1					8					1	1		1						1			
weltevreden																																
worthington													1																			
TOTAL	4	–	24	189	8	58	2	24	73	61	116	58	36	122	89	68	22	12	23	6	4	3	12	11	57	2	48	1	39	–	94	94
ALL OTHER*	–	8	1	6	1	3	38	–	4	1	2	4	2	8	4	3	–	3	4	–	–	–	–	–	7	7	3	–	–	–	4	6
TOTAL	4	8	25	195	9	61	40	24	77	62	118	62	38	130	93	71	22	15	27	6	4	3	12	11	64	9	51	1	39	–	98	100

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 108 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					
						1	1									1				1	6	0.3	77	0.7	*anatum*
																				2	11	0.5	36	0.3	*bareilly*
	1				1		4				1							3		3	38	1.8	253	2.3	*blockley*
																					8	0.4	51	0.5	*braenderup*
																	1	1		1	17	0.8	75	0.7	*bredeney*
																		3			5	0.2	24	0.2	*chester*
																					3	0.1	8	0.1	*cholerae-suis v kun*
																		2			19	0.9	85	0.8	*cubana*
	1				1		3											6		1	20	0.9	162	1.5	*derby*
1	3		1		2	2	1	1						1		3	1	11		5	193	9.0	1,012	9.4	*enteritidis*
					1																8	0.4	40	0.4	*give*
1	3	7			5		7									3	1	8			137	6.4	693	6.4	*heidelberg*
	1	1																			12	0.6	64	0.6	*indiana*
	6					3	4	1	1							7		11			104	4.8	663	6.1	*infantis*
					2													5			21	1.0	84	0.8	*java*
			1		3	1	10											1			41	1.9	153	1.4	*javiana*
	2	1																			14	0.6	52	0.5	*litchfield*
					1													1			3	0.1	22	0.2	*livingstone*
1	1				1													6		1	25	1.2	131	1.2	*manhattan*
																					7	0.3	53	0.5	*miami*
		1			5		1														9	0.4	20	0.2	*mississippi*
					2	1	1							1				3		1	34	1.6	144	1.4	*montevideo*
		1					1				1							3			20	0.9	97	0.9	*muenchen*
																		1			2	0.1	13	0.1	*newington*
1				4	10		20						2				1	10			150	7.0	696	6.4	*newport*
	1				4		6											4			27	1.3	127	1.2	*oranienburg*
1							3									4		10		6	40	1.9	149	1.4	*panama*
							1														14	0.6	98	0.9	*paratyphi B*
																1					4	0.2	29	0.3	*reading*
		2			2	1	9									1	1	15		1	113	5.2	496	4.6	*saint-paul*
					1												1	1			6	0.3	29	0.3	*san-diego*
											1									1	9	0.4	37	0.3	*schwarzengrund*
																		1			7	0.3	46	0.4	*senftenberg*
																		1		1	6	0.3	25	0.2	*tennessee*
2	4	3			3		3									1		10		1	75	3.5	564	5.2	*thompson*
	4			1			1					1					3	10			44	2.0	271	2.5	*typhi*
5	12	8	1	4	6	3	28	2	3		2			2		9	7	72	1	27	656	30.4	3,009	27.9	*typhimurium*
	2			1				1	1								2				29	1.3	132	1.2	*typhimurium v cop*
																				5	5	0.2	26	0.2	*weltevreden*
	1						2											1			5	0.2	20	0.2	*worthington*
12	42	24	3	10	50	12	106	5	5	–	5	1	2	4	–	30	18	200	1	57	1947	90.3	9,766	90.4	TOTAL
–	3	–	8	5	7	–	26	–	–	–	–	15	–	–	4	6	1	8	2	4	208		1,034		ALL OTHER*
12	45	24	11	15	57	12	132	5	5	–	5	16	2	4	4	36	19	208	3	61	2155		10,800		TOTAL

TABLE II. OTHER SALMONELLAE REPORTED FROM HUMAN SOURCES, JULY 1969

SEROTYPE	REPORTING CENTER																							
	ALK	ARK	CAL	CON	DC	FLA	GA	HAW	ILL	IND	IOW	LA	MD	MAS	MIC	MIS	MO	NEV	NH	NJ	NM	NYA	NYC	OHI
alachua									1				1											
albany			1																					
atlanta							2																	
berta			1			2																		
bonaire									1															
bovis-morbificans																								
brunei																								
california							1																	
cerro								1																1
colorado																							1	
daytona																								
drypool		1				1																		
eimsbuettel				1								1												
gaminara											1	2												
gatow																								
georgia																	1							
habana														3										
hartford				1					1															
heilbron																	1							
ibadan																								
inverness															1									
irumu																	2							
johannesburg			1																	1				
kentucky								1																
lomita																								
london																								
madelia						1																		
minnesota		2																						1
mission										1														
norwich																								
ohio												3												
oslo								1	1															
paratyphi A								1																
pensacola																								
poona			1			1							3	1	2								3	
potsdam							1																	
saphra																								
sendai					1																			
siegburg																								
simsbury														1										
tallahassee																								
urbana			1	1						1		1		1	1									2
welikada													3											
willemstad																								
TOTAL	–	3	5	3	1	5	4	4	4	2	1	7	7	6	4	–	4	–	–	1	–	–	4	4
NOT TYPED*	2	2	3	–	6	1	–	–	4	–	2	–	–	–	–	8	–	4	8	–	15	38	–	–
TOTAL	2	5	8	3	7	6	4	4	8	2	3	7	7	6	4	8	4	4	8	1	15	38	4	4

* See Table V-A

TABLE II – Continued

REPORTING CENTER														TOTAL	CUMULATIVE TOTAL	SEROTYPE
ORE	PA	RI			TEN	TEX	VT			VA	WAS	WIS				
					1									3	4	*alachua*
														1	7	*albany*
														2	8	*atlanta*
														3	16	*berta*
														1	1	*bonaire*
											3			3	5	*bovis-morbificans*
						1								1	1	*brunei*
														1	6	*california*
														2	7	*cerro*
														1	1	*colorado*
							1							1	1	*daytona*
														2	5	*drypool*
						1								3	18	*eimsbuettel*
														3	5	*gaminara*
						1								1	1	*gatow*
														1	1	*georgia*
														3	5	*habana*
										2				4	23	*hartford*
														1	1	*heilbron*
						1								1	1	*ibadan*
														1	4	*inverness*
														2	3	*irumu*
														2	4	*johannesburg*
														1	5	*kentucky*
						1								1	4	*lomita*
										1				1	5	*london*
														1	8	*madelia*
														3	6	*minnesota*
														1	1	*mission*
						3								3	8	*norwich*
														3	7	*ohio*
	1													3	10	*oslo*
														1	7	*paratyphi A*
	1													1	1	*pensacola*
					1									12	30	*poona*
														1	1	*potsdam*
						1								1	1	*saphra*
														1	1	*sendai*
						1								1	12	*siegburg*
														1	15	*simsbury*
					1									1	6	*tallahassee*
												1		9	20	*urbana*
														3	3	*welikada*
						1								1	2	*willemstad*
–	2	–			3	11	1			3	3	1		93	413	TOTAL
1	–	1			–	15	–			–	3	2		115	621	NOT TYPED*
1	2	1			3	26	1			3	6	3		208	1034	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, JULY 1969

SEROTYPE	DOMESTIC ANIMALS AND THEIR ENVIRONMENT							ANIMAL FEEDS			
	CHICKENS	TURKEYS	SWINE	CATTLE	HORSES	OTHER	SUBTOTAL	TANKAGE	VEGETABLE PROTEIN	OTHER	SUBTOTAL
anatum	1	6	15				22	6			6
bareilly	1						1	4			4
blockley	3						3	1			1
braenderup							–			1	1
bredeney	1	2	1				4	4			4
chester		5					5				–
cholerae-suis v kun			52		1		53				–
cubana		1					1	1		1	2
derby	2	1	12			1	16	1			1
enteritidis	4	1				3	8				–
give		1					1	1			1
heidelberg	21	15	1	1			38	3		2	5
indiana	1						1				–
infantis	13		1			1	15	9		1	10
java							–				–
javiana							–				–
litchfield							–				–
livingstone	1		1			1	3	10		11	21
manhattan			4				4				–
miami							–				–
mississippi							–				–
montevideo	6	2					8	11			11
muenchen	1	1					2	1			1
newington							–				–
newport	5	2				2	9	3			3
oranienburg	2	2					4	1		2	3
panama			3				3				–
paratyphi B							–				–
reading		4				2	6				–
saint-paul	3	2			1		6	1			1
san-diego		11					11				–
schwarzengrund	2					1	3				–
senftenberg	1	6					7	5		19	24
tennessee							–	2			2
thompson	5	1					6				–
typhi							–				–
typhimurium	4	5	19	7	7	6	48	1		2	3
typhimurium v cop	17	4			2	1	24				–
weltevreden							–				–
worthington	3	3				1	7				–
TOTAL	97	75	109	8	11	19	319	65	–	39	104
ALL OTHER*	9	4	10	12	2	9	46	36	–	15	51
TOTAL	**106**	**79**	**119**	**20**	**13**	**28**	**365**	**101**	**–**	**54**	**155**

* 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	7	6	41	207	*anatum*
		1					1		6	23	*bareilly*
		1		1			2	5	11	87	*blockley*
	1	1					1		3	6	*braenderup*
							–		8	64	*bredeney*
		1					1		6	22	*chester*
							–		53	353	*cholerae-suis v kun*
							–		3	76	*cubana*
						4	4		21	108	*derby*
1		2					2	1	12	90	*enteritidis*
1				4			4		7	30	*give*
		8					8		51	513	*heidelberg*
							–		1	12	*indiana*
	2	4	1			2	7		34	165	*infantis*
	1						–		1	7	*java*
	1					2	2		3	9	*javiana*
							–		–	2	*litchfield*
							–	1	25	78	*livingstone*
							–		4	30	*manhattan*
							–		–	6	*miami*
							–		–	–	*mississippi*
		10				1	11	2	32	161	*montevideo*
							–		3	27	*muenchen*
	1						–		1	26	*newington*
1						2	2		15	89	*newport*
		4				1	5	1	13	71	*oranienburg*
							–		3	10	*panama*
							–		–	4	*paratyphi B*
							–		6	31	*reading*
	1					1	1		9	196	*saint-paul*
							–		11	96	*san-diego*
		1					1		4	37	*schwarzengrund*
2					1		1		34	122	*senftenberg*
							–		2	75	*tennessee*
		8				1	9		15	154	*thompson*
							–		–	–	*typhi*
8		4		1	1		6	2	67	684	*typhimurium*
1							–		25	171	*typhimurium v cop*
							–		–	2	*weltevreden*
		1					1		8	74	*worthington*
14	7	52	1	6	2	15	76	18	538	3918	TOTAL
2	21	4	–	2	3	3	12	3	135	1065	ALL OTHER*
16	**28**	**56**	**1**	**8**	**5**	**18**	**88**	**21**	**673**	**4983**	**TOTAL**

TABLE IV. OTHER SALMONELLAE REPORTED FROM NONHUMAN SOURCES, JULY 1969

SEROTYPE	DOMESTIC ANIMALS AND THEIR ENVIRONMENT							ANIMAL FEEDS			
	CHICKENS	TURKEYS	SWINE	CATTLE	HORSES	OTHER	SUBTOTAL	TANKAGE	VEGETABLE PROTEIN	OTHER	SUBTOTAL
abaetetuba							–				–
alagbon							–				–
albany	1						1				–
binza					2		2	6		2	8
cerro			1				1	1		6	7
cholerae-suis			2				2				–
drypool	1	4				1	6	6			6
dublin				12			12				–
eimsbuettel			1			1	2				–
florida						2	2				–
gatow							–				–
habana							–			1	1
halmstad							–	1			1
johannesburg							–			1	1
kentucky	1						1	2		2	4
kottbus							–				–
lomita							–				–
manila							–			1	1
minnesota							–			1	1
new-brunswick							–	10			10
orion							–	5			5
oslo						3	3				–
poona							–				–
pullorum	4						4				–
saphra							–				–
siegburg							–	2			2
simsbury							–				–
thomasville	2						2	3			3
typhi-suis			3				3				–
urbana							–			1	1
welikada							–				–
TOTAL	9	4	7	12	2	7	41	36	–	15	51
NOT TYPED*	–	–	3	–	–	2	5	–	–	–	–
TOTAL	**9**	**4**	**10**	**12**	**2**	**9**	**46**	**36**	**–**	**15**	**51**

* 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	1	*abaetetuba*
	2						–		2	2	*alagbon*
					2		2		3	32	*albany*
							–		10	42	*binza*
		1					1		9	53	*cerro*
							–		2	10	*cholerae-suis*
							–		12	29	*drypool*
							–		12	64	*dublin*
						1	1		3	92	*eimsbuettel*
							–		2	3	*florida*
	1						–		1	2	*gatow*
							–		1	7	*habana*
							–		1	1	*halmstad*
							–		1	17	*johannesburg*
		1					1		6	107	*kentucky*
2		1					1		3	8	*kottbus*
							–	1	1	1	*lomita*
							–		1	2	*manila*
							–		1	71	*minnesota*
					1		1		11	18	*new-brunswick*
							–		5	6	*orion*
	1						–		4	8	*oslo*
	2						–		2	4	*poona*
							–		4	27	*pullorum*
						2	2		2	4	*saphra*
		1					1		3	51	*siegburg*
							–	1	1	34	*simsbury*
							–		5	19	*thomasville*
							–	1	4	10	*typhi-suis*
	13						–		14	20	*urbana*
				1			1		1	1	*welikada*
2	20	4	–	1	3	3	11	3	128	992	TOTAL
–	1	–	–	1	–	–	1	–	7	73	NOT TYPED*
2	21	4	–	2	3	3	12	3	135	1065	TOTAL

TABLE V. SALMONELLAE REPORTED BY GROUP IDENTIFICATION ONLY, JULY 1969

A. HUMAN SOURCES

REPORTING CENTER	GROUP														TOTAL
	B		C1		C2		D		E		H		O		UNK	
ALASKA			1												1	2
ARKANSAS	1		1													2
CALIFORNIA	1		1												1	3
DISTRICT OF COLUMBIA	5														1	6
FLORIDA	1															1
ILLINOIS	2														2	4
IOWA	2															2
MISSISSIPPI	5						2								1	8
NEVADA	4															4
NEW HAMPSHIRE	6		1				1									8
NEW MEXICO	8		2		4						1					15
NEW YORK-A															38	38
OREGON	1															1
RHODE ISLAND															1	1
TEXAS	3		2		5		1								4	15
WASHINGTON															3	3
WISCONSIN	2															2
TOTAL	41		8		9		4		–		1		–		52	115

B. NONHUMAN SOURCES

SOURCES	GROUP														TOTAL
	B		C1		C2		D		E		H		O		UNK	
DOMESTIC ANIMALS AND THEIR ENVIRONMENT									1				1		3	5
ANIMAL FEEDS																
WILD ANIMALS AND BIRDS																
REPTILES AND ENVIRONMENT															1	1
HUMAN DIETARY ITEMS									1							1
MISCELLANEOUS																
TOTAL	–		–		–		–		2		–		1		4	7