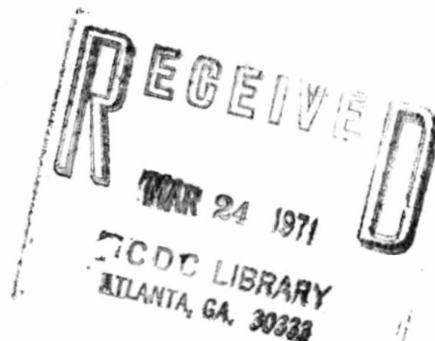


2/69 46=1-10,18,19,22
LIBRARY
COMMUNICABLE DISEASE CENTER



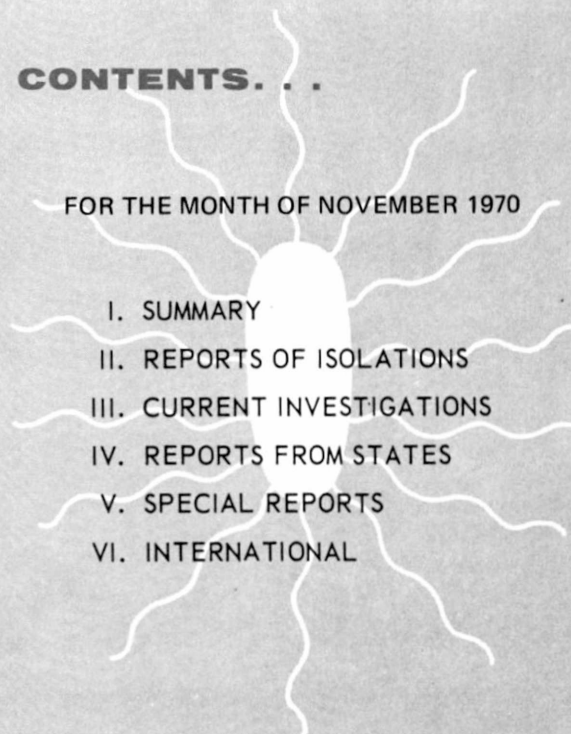
CENTER FOR DISEASE CONTROL

SALMONELLA

SURVEILLANCE

CONTENTS...

FOR THE MONTH OF NOVEMBER 1970

- 
- I. SUMMARY
 - II. REPORTS OF ISOLATIONS
 - III. CURRENT INVESTIGATIONS
 - IV. REPORTS FROM STATES
 - V. SPECIAL REPORTS
 - VI. INTERNATIONAL

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:

Center for Disease Control
Attn: Salmonellosis Surveillance Activity, Epidemiology Program
Atlanta, Georgia 30333

Center for Disease Control.....David J. Sencer, M.D., Director
Epidemiology Program..... Philip S. Brachman, M.D., Director
Bacterial Diseases Branch..... John V. Bennett, M.D., Chief
Eugene J. Gangarosa, M.D., Deputy Chief
Enteric Diseases Section.....Matthew S. Loewenstein, M.D., Chief
Salmonellosis Surveillance Activity Marshall D. Fox, D.V.M.
Andrew Taylor, Jr. M.D.
Statistician Stanley M. Martin, M.S.
Office of Veterinary Public Health Services James H. Steele, D.V.M., Chief

March 9, 1971

TABLE OF CONTENTS

	<u>PAGE</u>
I. SUMMARY	1
II. REPORTS OF ISOLATIONS	1
III. CURRENT INVESTIGATIONS	
None	1
IV. REPORTS FROM THE STATES	
Reports of Salmonella Outbreaks received during the months of October and November	2
V. SPECIAL REPORTS	
None	2
VI. INTERNATIONAL	
None	2

I. SUMMARY

In November 1970, 2,090 isolations of salmonellae were reported from humans, an average of 523 isolations per week (Tables I, II, and V-A). This number represents a decrease of 121 (18.8 percent) from the weekly average of October 1970, and an increase of 53 (11.3 percent) over the weekly average of November 1969.

Reports of 826 nonhuman isolations of salmonellae were received during November 1970 (Tables II, IV, and V-B).

II. REPORTS OF ISOLATIONS

The ten most frequently reported serotypes during November:

HUMAN				NONHUMAN		
Serotype	Number	Percent	Rank Last Month	Serotype	Number	Percent
1 <u>typhi-murium</u> *	515	24.6	1	<u>typhi-murium</u> *	181	21.9
2 <u>enteritidis</u>	254	12.2	2	<u>heidelberg</u>	78	9.4
3 <u>newport</u>	150	7.2	3	<u>infantis</u>	50	6.1
4 <u>heidelberg</u>	121	5.8	4	<u>senftenberg</u>	33	4.0
5 <u>infantis</u>	113	5.4	6	<u>newport</u>	30	3.6
6 <u>saint-paul</u>	86	4.1	5	<u>eimsbuettel</u>	27	3.3
7 <u>java</u>	61	2.9	10	<u>reading</u>	25	3.0
8 <u>thompson</u>	61	2.9	8	<u>anatum</u>	24	2.9
9 <u>typhi</u>	56	2.7	>10	<u>cubana</u>	22	2.7
10 <u>derby</u>	40	1.9	>10	<u>oranienburg</u>	21	2.5
Total				Total	491	59.4
TOTAL (all serotypes)				TOTAL (all serotypes)	826	
*Includes <u>var.</u> <u>copenhagen</u>	16	0.8		*Includes <u>var.</u> <u>copenhagen</u>	20	2.4

III. CURRENT INVESTIGATIONS

None.

IV. REPORTS FROM THE STATES

Reports of Salmonella Outbreaks received during the months of October and November

State	Month of Outbreak	Location	Serotype	Number of Persons				Deaths	Vehicle	Comments
				Ill	At Risk	With Positive Cultures	Hospitalized			
<u>October</u>										
Pennsylvania	Sept.	Nursing Home	<u>S. enteritidis</u>	54	149	35	2	1	Chicken	
Georgia	Aug.	Family Picnic	<u>S. enteritidis</u>	12	13	11	12	0	Homemade ice cream	Raw eggs used in ice cream
Michigan	Oct.	Prison Cafeteria	<u>S. enteritidis</u>	353	876	110	22	0	Multiple food contamination	
Washington	Aug.	Restaurant	<u>S. thompson</u>	5	8	5	1	0	Spaghetti with sauce	3 cooks asymptomatic carriers
Missouri	Sept.	Home	<u>S. typhi-murium</u>	11	11	3	0	0	Homemade ice cream	Raw eggs used in ice cream
Nebraska	Sept.	Restaurant	<u>S. enteritidis</u>	252	~2000	76	17	0	Roast beef and ham	Meat slicer positive for <u>S. enteritidis</u>
<u>November</u>										
Oregon	Aug.	Convalescent Home	<u>S. typhi-murium</u>	19	?	?	-	4	Person to Person	
Wisconsin	June	Restaurant	<u>S. saint-paul</u>	81	300	36	2	0	Turkey	

V. SPECIAL REPORTS

None

VI. INTERNATIONAL

None

TABLE I. COMMON SALMONELLAE REPORTED FROM HUMAN SOURCES, NOVEMBER, 1970

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	OH	IND	ILL	MIC	WIS	MIN	IOU	MO	ND	SD	NEB	KAN	DEL	MD	DC	VA	WVA	NC	SC	GA	FLA	
<i>anatum</i>								1			1		1	5	1	1													1			6	
<i>bareilly</i>									2		1				1																		
<i>blockley</i>				2		1		3		3				3										1	2		2		3		1		
<i>braenderup</i>				4				1			1						3																
<i>bredeney</i>	1			1						4																1					2		
<i>chester</i>				1												1					1					2		1					
<i>cholerae-suis v kun</i>														1																			
<i>cubana</i>				1						2		1		3		1									3						2	1	
<i>derby</i>								3	3	1	2			6											1			1		3	1		
<i>enteritidis</i>			1	8		4		8	16	8	32	2	1	14	93	1	3	2	2		1		2		7		4		3		5		
<i>give</i>									2																								
<i>heidelberg</i>				9	1	1		1	5	4	12	1	2	16	4	4			4	1	1		2		1		7		3		6	1	
<i>indiana</i>											1													1									
<i>infantis</i>				4				1	2	8	12	4		8	8	1	5	1		3			8	1	2		3				6	2	
<i>java</i>						1		2	2	5	8			4	1		2		2				1	3					1			4	
<i>javiana</i>																1						1									2	11	
<i>litchfield</i>				1		2				2	2			1		1									1							3	
<i>livingstone</i>																																	
<i>manhattan</i>								1	1		1			2	2	1	1								2				1		4		
<i>miami</i>				1																											3	6	
<i>mississippi</i>																																	
<i>montevideo</i>				1		1		1	3					1											1	3		1			1		1
<i>muenchen</i>										1	3	1	1		1					2			3		1				1		2	2	
<i>newington</i>								3		1																1					1		
<i>newport</i>				5				1	1	2	3	2		6	14	5		1	4				8		1		1		7		4	7	
<i>oranienburg</i>				1		1			1	1	2	4					1												3			2	
<i>panama</i>				1						1					2	1																	
<i>paratyphi B</i>				1								4					1								5		2						
<i>reading</i>				1							1					1										5		2					
<i>saint-paul</i>				2		2		4	3	3	5	4		13	1	3	2			1				1	6		1		3		2	1	
<i>san-diego</i>				1						1	2				2												1						
<i>schwarzengrund</i>									2	2																	1						
<i>senftenberg</i>						1					2			1						1						2						1	
<i>tennessee</i>														1																			
<i>thompson</i>				4		1		1	3	2		2		3	2						1		2		3	1	6		4		2		
<i>typhi</i>				2		3	1	1	2			3			1								1		4		1	2	2		3	1	
<i>typhimurium</i>	6		1	26	6	12		17	8	13	18	12	8	42	11	17	8	3	12	2	1		20		10	1	22	3	23		19	10	
<i>typhimurium v cop</i>	2			1		6									1																		
<i>weltevreden</i>																																	
<i>worthington</i>						1							1																				
TOTAL	9	—	2	78	7	37	1	51	55	62	111	42	13	131	144	39	26	7	24	8	7	—	48	8	58	3	51	5	57	—	68	60	
ALL OTHER *	—	2	—	7	1	—	22	5	5	—	4	3	—	8	8	5	1	—	—	—	—	4	3	1	7	11	2	—	4	—	25	11	
TOTAL	9	2	2	85	8	37	23	56	60	62	115	45	13	139	152	44	27	7	24	8	7	4	51	9	65	14	53	5	61	—	93	71	

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 82 cultures.

* See Table II.

TABLE I - Continued

GEOGRAPHIC DIVISION AND REPORTING CENTER																					TOTAL	% OF TOTAL	CUMU- LATIVE TOTAL	% OF CUMU- LATIVE TOTAL	SERO TYPE	
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						3				1									4	26	1.2	235	1.1	<i>anatum</i>	
		1				1	3														9	0.4	71	0.3	<i>bareilly</i>	
			1		1		3												6	1	33	1.6	603	2.7	<i>blockley</i>	
														1					1		12	0.6	81	0.4	<i>braenderup</i>	
																					11	0.5	175	0.8	<i>bredeney</i>	
2			1										1						1		8	0.4	75	0.3	<i>chester</i>	
		1					1														2	0.1	21	0.1	<i>cholerae-suis v kun</i>	
		2	1			1							2			1		5	7	40	1.9	439	2.0	<i>cubana</i>		
		7	1	1			3	6		1		3			1		3	5	3		1	254	12.2	2297	10.4	<i>derby</i>
																										<i>enteritidis</i>
1					4		2												2		10	0.5	74	0.3	<i>give</i>	
			1				1	8	1			2		3			1	3	15		121	5.8	1564	7.1	<i>heidelberg</i>	
																				4	0.2	98	0.4	<i>indiana</i>		
	1	1			2	1	4									4		12		9	113	5.4	1096	5.0	<i>infantis</i>	
1	4	2			1												1	11		5	61	2.9	391	1.8	<i>java</i>	
2	2			1	1	5		10											2		36	1.7	363	1.6	<i>javana</i>	
						4															17	0.8	169	0.8	<i>litchfield</i>	
		1				1														2	2	0.1	29	0.1	<i>livingstone</i>	
			1																5		25	1.2	310	1.4	<i>manhattan</i>	
																				11	0.5	58	0.3	<i>miami</i>		
1	1					1															3	0.1	63	0.3	<i>mississippi</i>	
			3			1		5				1		1			1		4	1	30	1.4	371	1.7	<i>montevideo</i>	
						1		2					1						3		25	1.2	251	1.1	<i>muenchen</i>	
					1																7	0.3	45	0.2	<i>newington</i>	
	1	3	1		4	9	2	29				1		1					22	5	150	7.2	1558	7.1	<i>newport</i>	
1				1		2	9				2		1						4		35	1.7	370	1.7	<i>oranienburg</i>	
					1		5				1						1		2	4	19	0.9	210	1.0	<i>panama</i>	
		1					1													1	16	0.8	186	0.8	<i>paratyphi B</i>	
	1	1	5			1		9								1	2	9			6	0.3	124	0.6	<i>reading</i>	
																1				86	4.1	1059	4.8	<i>saint-paul</i>		
1																			3		11	0.5	213	1.0	<i>san-diego</i>	
																			1		5	0.2	51	0.2	<i>schwarzengrund</i>	
	1						1														10	0.5	65	0.3	<i>senftenberg</i>	
													1								2	0.1	49	0.2	<i>tennessee</i>	
	2	3		1							3					8		6	1		61	2.9	883	4.0	<i>thompson</i>	
3	4		1	2	3		5						3	1	1			10		56	2.7	491	2.2	<i>typhi</i>		
		6		2	19	7	16	1			17						9	7	67	13	499	23.9	5140	23.3	<i>typhimurium</i>	
					4								2								16	0.8	258	1.2	<i>typhimurium v cop</i>	
																					17	0.8	97	0.4	<i>weltevreden</i>	
					1														1	1	5	0.2	50	0.2	<i>worthington</i>	
10	37	25	3	13	60	18	122	2	1	—	31	—	16	3	1	30	18	195	1	72	1870	89.5	19810	89.8	TOTAL	
1	2	1	2	2	5	2	30	—	—	—	—	22	6	—	—	1	1	3	—	3	220	X	2255	X	ALL OTHER *	
11	39	26	5	15	65	20	152	2	1	—	31	22	22	3	1	31	19	198	1	75	2090		22065		TOTAL	

TABLE II. OTHER SALMONELLAE REPORTED FROM HUMAN SOURCES, NOVEMBER, 1970

SEROTYPE	REPORTING CENTER																									
	ALA	ARI	ARK	CAL	DEL	DC	FLA	GA	HAW	ILL	KAN	KY	LA	MD	MAS	MIC	MIN	MIS	NEB	NH	NM	NYA	NYB			
<i>abderdeen</i>							1								1								1			
<i>adelaide</i>																										
<i>albany</i>													1													
<i>altona</i>																							1			
<i>anatum</i>																										
<i>berta</i>		3													1											
<i>binza</i>															1											
<i>bovis-morbificans</i>																										
<i>bradford</i>	1																									
<i>brandenburg</i>														1												
<i>california</i>								18																		
<i>cholerae-suis</i>																							1			
<i>dublin</i>				1																						
<i>dueseldorf</i>																										
<i>eastbourne</i>																										
<i>eimsbuettel</i>							1																			
<i>fayed</i>																										
<i>flint</i>								1																		
<i>geminara</i>														2												
<i>gatuni</i>							1																			
<i>habana</i>								1																		
<i>inverness</i>							1																			
<i>kaapstad</i>																										
<i>kentucky</i>							1			2			1													
<i>kottbus</i>										1				4		4							2			
<i>lomita</i>																										
<i>london</i>				1				1		3				2												
<i>meleagridis</i>								2							2											
<i>minnesota</i>		1		1																						
<i>mission</i>												1														
<i>molade</i>							3																			
<i>muenster</i>																										
<i>norwich</i>																1										
<i>nottingham</i>																1										
<i>orion</i>																	1									
<i>oslo</i>								1	3																	
<i>poona</i>		1			1		2																			
<i>pullorum</i>																										
<i>rubislaw</i>																										
<i>saphra</i>																										
<i>siegburg</i>		1											1													
<i>stanley</i>															1											
<i>taksony</i>											3															
<i>tallahassee</i>							1																			
<i>thomasville</i>																										
<i>uganda</i>								1																		
<i>urbana</i>										1					1											
TOTAL	1	6	—	3	1	—	11	25	3	7	3	1	5	7	7	6	1	—	—	—	—	—	5			
NOT TYPED*	—	—	2	—	—	11	—	—	—	1	—	—	—	—	—	2	—	2	4	2	22	22	—			
TOTAL	1	6	2	3	1	11	11	25	3	8	3	1	5	7	7	8	1	2	4	2	22	22	5			

*See Table V-A

TABLE II - Continued

REPORTING CENTER														TOTAL	CUMULATIVE TOTAL	SEROTYPE
NYC	NC	OHI	OK	LORE	PA	RI	TEN	TEX	VA	WAS	WIS					
		1												1	2	<i>aberdeen</i>
														2	4	<i>adelaide</i>
														1	19	<i>albany</i>
														1	1	<i>altona</i>
														1	1	<i>anatum</i>
					1									4	61	<i>berta</i>
														1	9	<i>binza</i>
														1	33	<i>bovis-morbificans</i>
							1							1	3	<i>bradford</i>
														2	5	<i>brandenburg</i>
	1					1								18	29	<i>california</i>
														2	9	<i>cholerae-suis</i>
														1	7	<i>dublin</i>
								3						1	13	<i>dueseldorf</i>
														3	7	<i>eastbourne</i>
	1													1	17	<i>eimsbuettel</i>
														1	1	<i>flayed</i>
														1	3	<i>flint</i>
														2	16	<i>gaminara</i>
														1	1	<i>getuni</i>
					1									1	5	<i>habana</i>
														1	5	<i>inverness</i>
					1									1	3	<i>kaapstad</i>
	2				1						1			5	45	<i>kentucky</i>
											2			16	45	<i>kottbus</i>
								1						1	17	<i>lomita</i>
														7	23	<i>london</i>
														4	25	<i>meleagridis</i>
														2	29	<i>minnesota</i>
														1	1	<i>mission</i>
1														3	7	<i>molade</i>
														1	22	<i>muenster</i>
														1	17	<i>norwich</i>
														1	3	<i>nottingham</i>
														1	6	<i>orion</i>
		1						2		1				4	25	<i>oslo</i>
		1												8	89	<i>poona</i>
														1	5	<i>pullorum</i>
								3						3	23	<i>rubislaw</i>
								3						3	14	<i>saphra</i>
1								2						5	48	<i>siegburg</i>
														1	12	<i>stanley</i>
														3	3	<i>taksony</i>
					1									1	7	<i>tallahassee</i>
														1	7	<i>thomasville</i>
														1	2	<i>uganda</i>
														2	52	<i>urbana</i>
2	4	3	-	-	4	1	1	14	-	1	3			125	1035	TOTAL
3	-	-	2	1	-	-	1	16	2	-	2			95	1220	NOT TYPED*
5	4	3	2	1	4	1	2	30	2	1	5			220	2255	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, NOVEMBER, 1970

SEROTYPE	DOMESTIC ANIMALS AND THEIR ENVIRONMENT							ANIMAL FEEDS			
	CHICKENS	TURKEYS	SWINE	CATTLE	HORSES	OTHER	SUBTOTAL	TANKAGE	VEGETABLE PROTEIN	OTHER	SUBTOTAL
<i>anatum</i>	3	2		3		2	10	8		1	9
<i>bareilly</i>							1	1			1
<i>blockley</i>	7					1	8	1		1	2
<i>braenderup</i>							1				1
<i>bredeney</i>		4	1				5	1			1
<i>chester</i>	1	1	2				4				1
<i>cholerae-suis v kun</i>			13				13				1
<i>cubana</i>							1	1			1
<i>derby</i>			4				4	2		6	8
<i>enteritidis</i>	1		1			1	3				1
<i>give</i>							1	5			5
<i>heidelberg</i>	1	59	4	1	2	1	68	2		2	4
<i>indiana</i>		1					1			1	1
<i>infantis</i>	5	5	1	1		1	13	5		3	8
<i>java</i>							1				1
<i>javiana</i>						1	1				1
<i>litchfield</i>							1				1
<i>livingstone</i>							1			6	6
<i>manhattan</i>	3						3	3			3
<i>miami</i>							1				1
<i>mississippi</i>							1				1
<i>montevideo</i>	3						3	5		3	8
<i>muenchen</i>		1	1			1	3				1
<i>newington</i>							1			2	2
<i>newport</i>	1	4		14		3	22				1
<i>oranienburg</i>	2	1					3	8		3	11
<i>panama</i>							1				1
<i>paratyphi B</i>							1				1
<i>reading</i>	1	23		1			25				1
<i>saint-paul</i>	2	5					7				1
<i>san-diego</i>		18					18			1	1
<i>schwarzengrund</i>	1	3					4	1			1
<i>senftenberg</i>		28					28	2		2	4
<i>tennessee</i>		4	1				5	4			4
<i>thompson</i>	6	1		1			8	1			1
<i>typhi</i>							1				1
<i>typhimurium</i>	10	36	5	73	4	9	137	1		3	4
<i>typhimurium v cop</i>	8	1	3	3		2	17				1
<i>weltevreden</i>							1				1
<i>worthington</i>	2	5			1		8	2			2
TOTAL	57	202	36	97	7	22	421	53	—	34	87
ALL OTHER*	8	19	8	11	—	3	49	69	—	31	100
TOTAL	65	221	44	108	7	25	470	122	—	65	187

* See Table IV

TABLE III - Continued

WILD ANIMALS AND BIRDS	REPTILES AND ENVIRON- MENT	HUMAN DIETARY ITEMS						MISCEL- LA- NEOUS	TOTAL	CUMU- LATIVE TOTAL	SEROTYPE
		EGGS AND PRODUCTS	POULTRY	RED MEAT	DAIRY PRODUCTS	OTHER	SUBTOTAL				
	1					1	1	3	24	439	<i>anatum</i>
	1						—		2	39	<i>bareilly</i>
		2	1				3		13	167	<i>blockley</i>
	3	1					1		4	27	<i>braenderup</i>
							—		6	119	<i>bredeney</i>
							—	6	10	48	<i>chester</i>
							—		13	274	<i>cholerae-suis v kun</i>
					13		13	8	22	135	<i>cubana</i>
							—		12	115	<i>derby</i>
4	1	1					1		9	130	<i>enteritidis</i>
							—		5	35	<i>give</i>
1	1		1				1	3	78	741	<i>heidelberg</i>
						8	8		10	59	<i>indiana</i>
2		1				25	26	1	50	348	<i>infantis</i>
	3						—		3	31	<i>java</i>
							—		1	18	<i>javana</i>
	1						—		1	15	<i>litchfield</i>
							—		6	56	<i>livingstone</i>
							—		6	38	<i>manhattan</i>
							—		—	8	<i>miami</i>
		2					—		—	3	<i>mississippi</i>
							2	1	14	307	<i>montevideo</i>
	1						—		4	49	<i>muenchen</i>
							—		2	26	<i>newington</i>
	5						—	3	30	217	<i>newport</i>
		2				2	4	3	21	197	<i>oranienburg</i>
							—		—	9	<i>panama</i>
							—		—	2	<i>paratyphi B</i>
							—		25	71	<i>reading</i>
1	2						—	1	11	451	<i>saint-paul</i>
							—		19	195	<i>san-diego</i>
1		2		4			6		12	137	<i>schwarzengrund</i>
						1	1		33	263	<i>senftenberg</i>
							—		9	254	<i>tennessee</i>
1		3					3	2	15	276	<i>thompson</i>
							—		—	—	<i>typhi</i>
15	1						—	4	161	1223	<i>typhimurium</i>
2	1						—		20	203	<i>typhimurium v cop</i>
							—		1	2	<i>weltevreden</i>
1							—		10	225	<i>worthington</i>
28	21	14	2	4	13	37	70	35	662	6952	TOTAL
3	3	1	1	1	—	5	8	1	164	1565	ALL OTHER*
31	24	15	3	5	13	42	78	36	826	8517	TOTAL

TABLE IV. OTHER SALMONELLAE REPORTED FROM NONHUMAN SOURCES, NOVEMBER, 1970

SERO TYPE	DOMESTIC ANIMALS AND THEIR ENVIRONMENT							ANIMAL FEEDS			
	CHICKENS	TURKEYS	SWINE	CATTLE	HORSES	OTHER	SUBTOTAL	TANKAGE	VEGETABLE PROTEIN	OTHER	SUBTOTAL
<i>agona</i>							1				1
<i>alachua</i>							1	1			1
<i>albany</i>		2					2				2
<i>berta</i>							1				1
<i>binza</i>		7					7	11		1	12
<i>california</i>							1	2		1	3
<i>cerro</i>							1	4			4
<i>cholerae-suis</i>			5				5				5
<i>drypool</i>							1	5		3	8
<i>dublin</i>				11			11				11
<i>eimsbuettel</i>	3	3					6	9		12	21
<i>habana</i>							—	2			2
<i>illinois</i>							—	2			2
<i>johannesburg</i>							—	1		1	2
<i>kentucky</i>		2					2	7			7
<i>kottbus</i>							—	1			1
<i>lexington</i>							—			1	1
<i>madelia</i>							—	3			3
<i>manila</i>							—			2	2
<i>meleagridis</i>							—	1			1
<i>menhaden</i>							—	2			2
<i>minnesota</i>							—	1			1
<i>muenster</i>		3					3	6			6
<i>ohio</i>	2						2	4		2	6
<i>poona</i>							—			1	1
<i>pullorum</i>							—				—
<i>siegburg</i>							—	3		1	4
<i>simsbury</i>	1						1				—
<i>taksony</i>							—				—
<i>thomasville</i>							—	1		6	7
<i>typhi-suis</i>			3				3				—
<i>urbana</i>	1						1				—
<i>westhampton</i>							—	2			2
TOTAL	7	17	8	11	—	—	43	68	—	31	99
NOT TYPED*	1	2	—	—	—	3	6	1	—	—	1
TOTAL	8	19	8	11	—	3	49	69	—	31	100

* See Table V-B

TABLE IV - Continued

WILD ANIMALS AND BIRDS	REPTILES AND ENVIRON- MENT	HUMAN DIETARY ITEMS						MISCEL- LA- NEOUS	TOTAL	CUMU- LATIVE TOTAL	SEROTYPE
		EGGS AND PRODUCTS	POULTRY	RED MEAT	DAIRY PRODUCTS	OTHER	SUBTOTAL				
	2		1	1			1	1	1	4	<i>agora</i> <i>alachua</i> <i>albeny</i> <i>berta</i> <i>binza</i>
		1					1		3	36	<i>california</i>
							1		5	43	<i>cerro</i>
							1		5	18	<i>cholerae-suis</i>
							1		8	68	<i>drypool</i>
							1		11	79	<i>dublin</i>
							1		27	221	<i>eimsbuettel</i>
						3	3		2	7	<i>habana</i>
							3		5	9	<i>illinois</i>
							1		2	17	<i>johannesburg</i>
							1		9	85	<i>kentucky</i>
	1						1		2	3	<i>kottbus</i>
							1		1	15	<i>lexington</i>
							1		3	12	<i>medellia</i>
							1		2	7	<i>manila</i>
							1		1	35	<i>meleagridis</i>
							1		2	2	<i>menhaden</i>
							1		1	100	<i>minnesota</i>
						1	1		9	28	<i>munster</i>
							1		9	20	<i>ohio</i>
3							1		1	14	<i>poona</i>
						1	1		3	54	<i>pullorum</i>
							1		4	70	<i>siegburg</i>
							1		1	45	<i>simsbury</i>
							1		1	28	<i>takony</i>
							1		7	69	<i>thomasville</i>
							1		3	7	<i>typhi-suis</i>
							1		1	28	<i>urbane</i>
							1		2	3	<i>westhampton</i>
							1				
3	3	1	1	1	1	5	8	1	157	1415	TOTAL
-	-	-	-	-	-	-	-	-	7	150	NOT TYPED *
3	3	1	1	1	1	5	8	1	164	1565	TOTAL

A. HUMAN SOURCES

REPORTING CENTER	GROUP															TOTAL
	B	C	C1	C2		D	E	G	I		K	R	UNK			
ARKANSAS						2										2
D.C.	6	1		1									3			11
ILLINOIS													1			1
MICHIGAN	1												1			2
MISSISSIPPI	1												1			2
NEBRASKA	4															4
NEW HAMPSHIRE						2										2
NEW MEXICO	4		7	7		2		2								22
NEW YORK-A													22			22
NEW YORK-C		1											2			3
OKLAHOMA	1					1										2
OREGON													1			1
TENNESSEE	1															1
TEXAS			2	5		3	1		1				4			16
VIRGINIA													2			2
WISCONSIN													2			2

B. NONHUMAN SOURCES

SOURCES	GROUP														TOTAL
	B	C	C1	C2		D	E	G	I		K	R	UNK		
DOMESTIC ANIMALS AND THEIR ENVIRONMENT	3		1									1	1		6
ANIMAL FEEDS											1				1
WILD ANIMALS AND BIRDS															-
REPTILES AND ENVIRONMENT															-
HUMAN DIETARY ITEMS															-
MISCELLANEOUS															-
TOTAL	3	-	1	-		-	-	-	-		1	1	1		7

STATE EPIDEMIOLOGISTS AND STATE LABORATORY DIRECTORS

Key to all disease surveillance activities are the physicians who serve as State epidemiologists. They are responsible for collecting, interpreting, and transmitting data and epidemiological information from their individual States; their contributions to this report are gratefully acknowledged. In addition, valuable contributions are made by State Laboratory Directors; we are indebted to them for their valuable support.

STATE

STATE EPIDEMIOLOGIST

STATE LABORATORY DIRECTOR

Alabama	Frederick S. Wolf, M.D.	Thomas S. Hosty, Ph.D.
Alaska	Donald K. Freedman, M.D.	Ralph B. Williams, Dr.P.H.
Arizona	Philip M. Hotchkiss, D.V.M.	H. Gilbert Crecelius, Ph.D.
Arkansas	John A. Harrel, Jr., M.D.	Robert T. Howell, Dr.P.H.
California	James Chin, M.D.	Howard L. Bodily, Ph.D.
Colorado	C. S. Molloyhan, M.D.	C. D. McGuire, Ph.D.
Connecticut	James C. Hart, M.D.	William W. Ullmann, Ph.D.
Delaware	Floyd I. Hudson, M.D.	Irene V. Mazeika, M.D.
District of Columbia	William E. Long, M.D.	Gerrit W. H. Schepers, M.D.
Florida	E. Charlton Prather, M.D.	Nathan J. Schneider, Ph.D.
Georgia	John E. McCroan, Ph.D.	Earl E. Long, M.S.
Hawaii	Lloyd C. Guthrie, M.D.	Henri Minette, Dr.P.H.
Idaho	John A. Mather, M.D.	Darrell W. Brock, Dr.P.H.
Illinois	Norman J. Rose, M.D.	Richard Morrissey, M.P.H.
Indiana	Ray H. Vanderhook, M.D.	Josephine Van Fleet, M.D.
Iowa	Arnold M. Reeve, M.D.	W. J. Hausler, Jr., M.D.
Kansas	Don E. Wilcox, M.D.	Nicholas D. Duffett, Ph.D.
Kentucky	Calixto Hernandez, M.D.	B. F. Brown, M.D.
Louisiana	Charles T. Caraway, D.V.M.	George H. Hauser, M.D.
Maine	O. Thomas Feagin, M.D. (Acting)	Charles Okey, Ph.D.
Maryland	Howard J. Garber, M.D.	Robert L. Cavanaugh, M.D.
Massachusetts	Nicholas J. Fiumara, M.D.	Geoffrey Edsall, M.D.
Michigan	John L. Isbister, M.D.	Kenneth R. Wilcox, Jr., M.D.
Minnesota	D. S. Fleming, M.D.	Henry Bauer, Ph.D.
Mississippi	Durward L. Blakey, M.D.	R. H. Andrews, M.S.
Missouri	C. W. Meinershagen, M.D.	Elmer Spurrier, Dr.P.H.
Montana	Mary E. Soules, M.D.	David B. Lackman, Ph.D.
Nebraska	Henry D. Smith, M.D.	Henry McConnell, Dr.P.H.
Nevada	William M. Edwards, M.D.	Margaret Williams (Acting)
New Hampshire	Walter Kaupas, M.D.	Robert A. Milner, Dr.P.H.
New Jersey	Ronald Altman, M.D.	Martin Goldfield, M.D.
New Mexico	Paul E. Pierce, M.D. (Acting)	Daniel E. Johnson, Ph.D.
New York City	Vincent F. Guinee, M.D.	Morris Schaeffer, M.D.
New York State	Alan R. Hinman, M.D.	Donald J. Dean, D.V.M.
North Carolina	Martin P. Hines, D.V.M.	Lynn G. Maddry, Ph.D.
North Dakota	Kenneth Mosser	C. Patton Steele, Ph.D.
Ohio	John H. Ackerman, M.D.	Charles C. Croft, Sc.D.
Oklahoma	R. LeRoy Carpenter, M.D.	F. R. Hassler, Ph.D.
Oregon	Morris Chelsky, M.D.	Gatlin R. Brandon, M.P.H.
Pennsylvania	W. D. Schrack, Jr., M.D.	James E. Prier, Ph.D.
Puerto Rico	Rafael Correa Coronas, M.D.	Angel A. Colon, M.D.
Rhode Island	David L. Starbuck, M.D. (Acting)	Malcolm C. Hinchliffe, M.S.
South Carolina	Donald H. Robinson, M.D.	Arthur F. DiSalvo, M.D.
South Dakota	John A. Lowe, M.D.	B. E. Diamond, M.S.
Tennessee	William H. Armes, M.D.	J. Howard Barrick, Ph.D.
Texas	M. S. Dickerson, M.D.	J. V. Irons, Sc.D.
Utah	Taira Fukushima, M.D.	Russell S. Fraser, M.S.
Vermont	Robert B. Aiken, M.D.	Dymitry Pomar, D.V.M.
Virginia	H. E. Gillespie, M.D.	W. French Skinner, M.P.H.
Washington	Byron J. Francis, M.D.	W. R. Giedt, M.D.
West Virginia	N. H. Dyer, M.D.	J. Roy Monroe, Ph.D.
Wisconsin	H. Grant Skinner, M.D.	S. L. Inhorn, M.D.
Wyoming	Herman S. Parish, M.D.	Donald T. Lee, Dr.P.H.