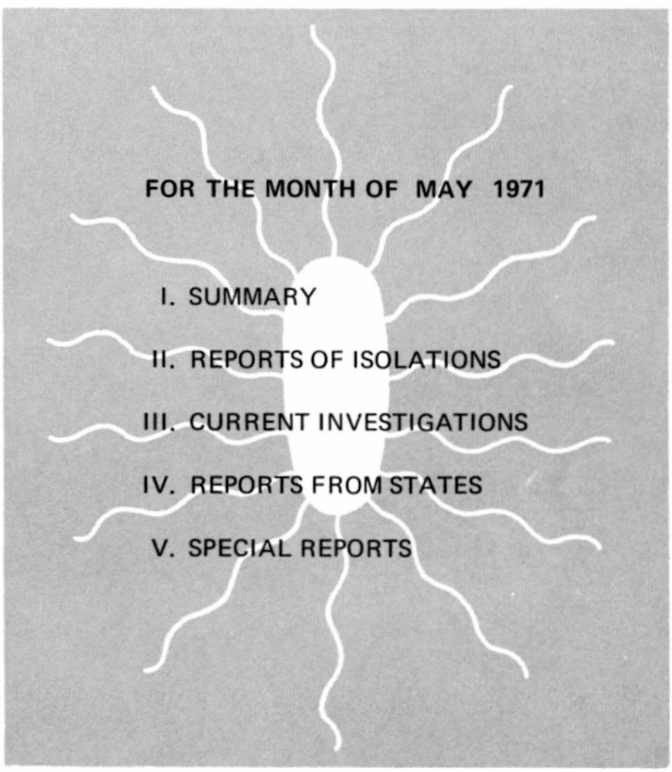
REPORT NO. 110
NOVEMBER 1971

CENTER FOR DISEASE CONTROL

SALMONELLA

SURVEILLANCE



U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE/PUBLIC HEALTH SERVICE
Health Services and Mental Health Administration

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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October 29, 1971

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DHEW Publication No. (HSM) 72-8072

I. SUMMARY

In May 1971, 1,837 isolations of salmonellae were reported from humans, an average of 459 isolations per week (Tables I, II, and V-A). This number represents an increase of 84 (22.4 percent) over the weekly average of April 1971 and an increase of 78 (20.5 percent) over the weekly average of May 1970.

Reports of 726 nonhuman isolations of salmonellae were received during May 1971 (Tables II, IV, and V-B).

II. REPORTS OF ISOLATIONS

The 10 most frequently reported serotypes during May:

	HUMAN				NONHUMAN		
	Serotype	Number	Percent	Rank Last Month	Serotype	Number	Percent
1	typhi-murium*	519	28.3	1	typhi-murium*	132	18.2
2	enteritidis	150	8.2	2	heidelberg	62	8.5
3	heidelberg	123	6.7	4	anatum	52	7.2
4	infantis	113	6.2	3	blockley	52	7.2
5	newport	110	6.0	5	saint-paul	50	6.9
6	thompson	69	3.8	>10	san-diego	34	4.7
7	saint-paul	65	3.5	7	infantis	31	4.3
8	blockley	50	2.7	6	cholerae-suis var. kunzendorf	20	2.8
9	java	46	2.5	8	bredeney	19	2.6
10	oranienburg	39	2.1	>10	schwarzengrund	19	2.6
	Total	1,284	69.9		Total	471	64.9
	Total (all serotypes)	1,837			Total (all serotypes)	726	
	*Includes var. copenhagen	31	1.7		*Includes var. copenhagen	35	

III. CURRENT INVESTIGATIONS

None

IV. REPORTS FROM THE STATES

Reports of Salmonella Outbreaks Received During the Months of April and May

State	Month of Outbreak	Location	Serotype	Number of Persons				Deaths	Vehicle	Comment
				Ill	At Risk	With Positive Culture	Hospitalized			
April										
Virginia	March	Hospital nursery	*S. montevideo*	4	57	4	–	0	Contact-spread	
Maryland	November 1970	Home	*S. typhi*	4	13	5	1	0	Well water	Wells contaminated by nearby privies
Virginia	January	Restaurant	*S. schwarzengrund*	30	65	4	–	0	Turkey	
Louisiana	March	Community	*S. typhi-murium*	9	?	9	?	0	Unknown	
Louisiana	April	Hospital nursery	*S. cubana*	< 5	?	5	5	0	Unknown	
May										
Michigan	May	Home	*S. typhi-murium*	28	37	11*	3	0	Smoked fish**	

*10 *S. typhi-murium* and 1 *S. san diego*

**Fish positive for *S. typhi-murium;* eggs positive for *S. san diego*

V. SPECIAL REPORTS

A. Announcement of a Change in the Frequency of Salmonella Surveillance Reports

Beginning with the report for July 1971, the Salmonella Surveillance Report will be distributed quarterly rather than the present monthly distribution. Salmonella Surveillance Report No. 111 for the month of June 1971 will be the final monthly issue. Report No. 112 will include surveillance data for the months of July, August, and September.

This revised distribution schedule has been favorably received by the Association of State and Territorial Epidemiologists and by readers of the Salmonella Surveillance Report. One of the important decisions leading to this change is the recognition that the more common modes of salmonella transmission, such as mishandled foods, person-to person spread, and contact with pets, seldom require immediate reporting as an adjunct to control. Quarterly publications will continue to provide timely information on current salmonellosis topics.

As in the past, outbreaks traced to or potentially due to commercial food products and other timely news items will be published weekly in the Morbidity and Mortality Weekly Reports (MMWR). Persons who desire this publication may write to the Editor, Morbidity and Mortality Weekly Report, Center for Disease Control, Atlanta, Georgia 30333.

We wish to thank those readers who sent us their comments on this change.

B. Announcement of a Course Describing Methods of Isolating Salmonellae from Food Products and Animal Feeds

The Epidemiology Program and the Laboratory Division of the Center for Disease Control will conduct a 2-week course, January 3-14, 1972, describing methods of isolating salmonellae from food products and animal feeds. The prerequisite is 6 months experience in a bacteriology or quality control laboratory. The course will be divided equally between lectures and laboratory exercises.

Lecture topics will include epidemiology, sampling, and principles of isolation and identification. The laboratory exercises will provide actual experience in isolating and identifying biologically and serologically salmonellae isolated from foods and feeds. The products to be analyzed will include eggs, dried milk, candy, red meats, poultry, animal by-products, and fish meal.

TABLE I. COMMON SALMONELLAE REPORTED FROM HUMAN SOURCES, MAY, 1971

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											6			1			1												1		2	
bareilly											5						1										1					
blockley				2		3			5	1	6	5	1	1	2		1	3							2		1	1	1		4	
braenderup										1						3															1	
bredeney														1											1		1				1	
chester						1											1															
cholerae-suis v kun																																
cubana				2		2					1				1								1		1		2		1		1	1
derby										2	4	2		4	1	1									3		1				2	2
enteritidis		2	1	5		11		1	14	6	5	5		14	7	9	6	1	8				2		9		2		6		2	4
give														1											1							
heidelberg				10		1		2	5		6	1		8	3	1	5		6	1			1		7		4		4		2	7
indiana										4				1											3						1	
infantis				1	1	4		1	7	2	17	2	1	5	2	8	3		1		1		2		3		4		1		3	1
java						1			8	5	5			5		2			3													
javiana											1	1	1			1			1												2	8
litchfield						1			1					2		1									2							
livingstone															1																	
manhattan						1			2	1	1	1	1	2	5			2							7						2	2
miami						2					1																					2
mississippi																																
montevideo						1				1	3			1	1	3							1				2				1	1
muenchen										1	3	1	1	3	2	3		1	1				1		1		1		1		2	2
newington																																
newport			1	2		2		1	6	7	6	4		5	6	8	3		1		2		1		5		1		2		3	9
oranienburg						3		1		4	7					3									2		4				4	
panama										2	1			1	1	1									1							
paratyphi B				9								2			1			1							3							
reading				1																					1		1		1			1
saint-paul				12		1		2	6		3	7		5	5		1						1		1				1		1	
san-diego						2			1						1												1					
schwarzengrund										1	1				4												1					
senftenberg						1									1										2						1	1
tennessee				2						1				1		1	1				1										1	
thompson	1			5		1			4	1	3			1		9	1		1								6	1	2		3	3
typhi				1		2			3			1	1	4					2								1	2	1			1
typhimurium	5		1	32		15		1	21	11	25	6	5	27	28	17	7	2	8	2			6		17		12	1	13		13	15
typhimurium v cop	1			5		5				2					4																	
weltevreden																																
worthington													1																			
TOTAL	7	2	3	89	1	60	–	9	83	53	110	38	12	93	76	71	31	10	32	3	4	–	16	–	72	–	46	5	35	–	52	60
ALL OTHER*	–	8	–	5	4	3	17	–	–	2	11	1	–	7	3	1	10	–	–	–	–	4	1	–	4	8	6	–	–	–	3	5
TOTAL	7	10	3	94	5	63	17	9	83	55	121	39	12	100	79	72	41	10	32	3	4	4	17	–	76	8	52	5	35	–	55	65

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 23 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		9											2			24	1.3	102	1.2	*anatum*
																					7	0.4	19	0.2	*bareilly*
	1	1					5									1		3			50	2.7	238	2.7	*blockley*
																		1			6	0.3	42	0.5	*braenderup*
					2													3			9	0.5	63	0.7	*bredeney*
													1				1				4	0.2	31	0.4	*chester*
																		1			1	0.1	9	0.1	*cholerae-suis v kun*
				1			2											1			17	0.9	182	2.1	*cubana*
	1						1											6			30	1.6	166	1.9	*derby*
2	1	4			4	2	4										1	12			150	8.2	795	9.1	*enteritidis*
		1					2											1			6	0.3	25	0.3	*give*
	3	1			1		10				2		5	2			1	24			123	6.7	531	6.1	*heidelberg*
		1																			10	0.5	39	0.4	*indiana*
		2		4	9	1	6		3		1		1	1				12		3	113	6.2	465	5.3	*infantis*
	1																1	15			46	2.5	233	2.7	*java*
							2						1					2			20	1.1	89	1.0	*javiana*
																		3			10	0.5	64	0.7	*litchfield*
							1											1			3	0.2	21	0.2	*livingstone*
																		1			28	1.5	158	1.8	*manhattan*
																					5	0.3	21	.2	*miami*
					1																1	0.1	7	0.1	*mississippi*
					2		1											3			21	1.1	156	1.8	*montevideo*
	1	1			1	1	2						1			1					32	1.7	112	1.3	*muenchen*
																					–	–	13	0.1	*newington*
1					8	1	4				1		4				5	11			110	6.0	439	5.0	*newport*
	2			1			4						4								39	2.1	138	1.6	*oranienburg*
							1											9		4	21	1.1	64	0.7	*panama*
																					16	0.9	82	0.9	*paratyphi B*
						1										7	4	1			18	1.0	93	1.1	*reading*
	1						2		2		2					6		6			65	3.5	369	4.2	*saint-paul*
					1											1	1	1			9	0.5	74	0.8	*san-diego*
																					7	0.4	29	0.3	*schwarzengrund*
	1	1					2											7		1	18	1.0	91	1.0	*senftenberg*
	1													1				1			11	0.6	30	0.3	*tennessee*
	1	2		1	4	1	4				1							13			69	3.8	263	3.0	*thompson*
1	2			2	2	2						1						4			33	1.8	206	2.4	*typhi*
	17	8	1	1	15	6	26	1			7		9			5	12	78		12	488	26.6	2181	25.0	*typhimurium*
6	1				3								3				1				31	1.7	151	1.7	*typhimurium v cop*
																				2	2	0.1	42	0.5	*weltevreden*
																		1			2	0.1	24	0.3	*worthington*
10	34	22	1	10	55	15	88	1	5	–	14	1	29	4	–	21	27	223	–	22	1655	90.1	7857	90.0	TOTAL
1	2	–	1	4	3	–	28	–	–	–	2	17	1	–	3	2	–	8	7	–	182		876		ALL OTHER*
11	36	22	2	14	58	15	116	1	5	–	16	18	30	4	3	23	27	231	7	22	1837		8733		TOTAL

TABLE II. OTHER SALMONELLAE REPORTED FROM HUMAN SOURCES, MAY, 1971

SEROTYPE	REPORTING CENTER																					
	ALK	ARI	ARK	CAL	COL	CON	DC	FLA	GA	ILL	KAN	KY	LA	MD	MAS	MIC	MIN	MIS	NEB	NEV	NH	NJ	NM	
abortus-bovis																								
agona				1						1														
alachua				1																				
albany													1											
amager																								
berlin																								
berta			1	1								1		1										
bovis-morbificans															3									
california																1								
decatur																								
drypool																						1		
dublin				3																				
duesseldorf			1																					
eastbourne																								
eimsbuettel								1																
gaminara													1											
hartford								2																
ibadan																								
inverness								2																
kaapstad																								
kentucky									1															
kottbus																						1		
lomita																								
london													1	1		2								
meleagridis									1		1													
minnesota														1										
new-brunswick					2																			
norwich																								
oslo																	7							
paratyphi A										1														
poona		1		1						1					1									
rubislaw																								
siegburg									1															
stanley																	3							
uganda															1									
urbana						1				2														
wandsworth										1														
westhampton																								
TOTAL	–	1	2	7	2	1	–	5	3	6	1	1	3	3	5	3	10	–	–	–	–	2	–	
NOT TYPED*	7	–	2	1	–	2	8	–	–	1	–	–	–	1	–	–	–	1	4	3	8	–	17	
TOTAL	7	1	4	8	2	3	8	5	3	7	1	1	3	4	5	3	10	1	4	3	8	2	17	

* See Table V-A

TABLE II – Continued

REPORTING CENTER														TOTAL	CUMULATIVE TOTAL	SEROTYPE
NYA	OHI	PA	RI	TEN	TEX	VA	WAS	WIS								
							1							1	1	*abortus-bovis*
				1										3	5	*agona*
		3												4	6	*alachua*
								1						2	7	*albany*
		1												1	3	*amager*
				1										1	1	*berlin*
		5												9	26	*berta*
														3	6	*bovis-morbificans*
	1													2	7	*california*
						1								1	1	*decatur*
		1												2	4	*drypool*
														3	4	*dublin*
														1	1	*duesseldorf*
					1									1	5	*eastbourne*
														1	1	*eimsbuettel*
														1	5	*gaminara*
														2	5	*hartford*
					1									1	1	*ibadan*
														2	4	*inverness*
		1												1	8	*kaapstad*
						4								5	20	*kentucky*
														1	26	*kottbus*
					1									1	6	*lomita*
														4	12	*london*
														2	9	*meleagridis*
														1	13	*minnesota*
														2	2	*new-brunswick*
					1									1	3	*norwich*
														7	19	*oslo*
														1	3	*paratyphi A*
					2									6	37	*poona*
					1									1	5	*rubislaw*
					5									6	24	*siegburg*
														3	5	*stanley*
														1	1	*uganda*
														3	24	*urbana*
														1	1	*wandsworth*
							1							1	1	*westhampton*
–	1	11	–	2	12	5	2	1						89	420	TOTAL
17	–	–	4	–	16	1	–	–						93	456	NOT TYPED*
17	**1**	**11**	**4**	**2**	**28**	**6**	**2**	**1**						**182**	**876**	**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, 1971

SEROTYPE	DOMESTIC ANIMALS AND THEIR ENVIRONMENT							ANIMAL FEEDS			
	CHICKENS	TURKEYS	SWINE	CATTLE	HORSES	OTHER	SUBTOTAL	TANKAGE	VEGETABLE PROTEIN	OTHER	SUBTOTAL
anatum	1	15				1	17	15			15
bareilly							—	1			1
blockley	48	2				1	51				—
braenderup							—				—
bredeney			17			1	18	1			1
chester		5					5				—
cholerae-suis v kun			19			1	20				—
cubana							—	5			5
derby		5	1				6			1	1
enteritidis	2	2	2				6			2	2
give							—				—
heidelberg	8	23	2	4	1	1	39	2			2
indiana				1			1				—
infantis	16	6	1		1		24	1		1	2
java			1				1				—
javiana							—				—
litchfield							—				—
livingstone							—			6	6
manhattan		2					2				—
miami							—				—
mississippi							—				—
montevideo	5	2	1				8	3			3
muenchen		1				1	2				—
newington						1	1	1			1
newport	1		1	5			7				—
oranienburg							—	2		5	7
panama							—				—
paratyphi B							—			1	1
reading	1	5					6				—
saint-paul	4	23	1			2	30				—
san-diego		30					30				—
schwarzengrund		11	1	1			13	2		2	4
senftenberg	4	10					14	1			1
tennessee	1	1	2				4				—
thompson	6	3					9				—
typhi							—				—
typhimurium	4	8	13	33	9	17	84	1			1
typhimurium v cop	16	1	4	10	1	2	34				—
weltevreden							—				—
worthington	10	2				1	13	2			2
TOTAL	127	157	66	54	12	29	445	37	—	18	55
ALL OTHER*	25	14	2	3	—	—	44	12	—	9	21
TOTAL	**152**	**171**	**68**	**57**	**12**	**29**	**489**	**49**	**—**	**27**	**76**

* 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				
4		1				15	16		52	186	*anatum*
	1						–		2	15	*bareilly*
1							–		52	121	*blockley*
							–		–	12	*braenderup*
							–		19	55	*bredeney*
2							–		7	15	*chester*
							–		20	124	*cholerae-suis v kun*
							–		5	48	*cubana*
							–		7	46	*derby*
	1	1					1		10	41	*enteritidis*
							–		–	7	*give*
14			6				6	1	62	255	*heidelberg*
1							–		2	8	*indiana*
		1	4				5		31	137	*infantis*
	3						–		4	36	*java*
							–		–	6	*javiana*
	3						–		3	11	*litchfield*
							–		6	10	*livingstone*
							–		2	35	*manhattan*
	4						–		4	4	*miami*
							–	1	1	1	*mississippi*
						1	1	1	13	108	*montevideo*
	2			1			1	1	6	23	*muenchen*
							–		2	33	*newington*
2	2					1	1		12	84	*newport*
	3			2			2		12	55	*oranienburg*
1							–		1	6	*panama*
	1						–		2	6	*paratyphi B*
							–		6	145	*reading*
7	11	1					1	1	50	198	*saint-paul*
3						1	1		34	111	*san-diego*
2							–		19	61	*schwarzengrund*
				1			1	1	17	105	*senftenberg*
		1					1		5	50	*tennessee*
			1				1		10	86	*thompson*
							–	1	1	9	*typhi*
4	2	1			2	1	4	2	97	554	*typhimurium*
1							–		35	111	*typhimurium v cop*
							–		–	–	*weltevreden*
							–		15	75	*worthington*
42	33	6	11	4	2	19	42	9	626	2993	TOTAL
9	12	6	–	–	–	4	10	4	100	528	ALL OTHER*
51	**45**	**12**	**11**	**4**	**2**	**23**	**52**	**13**	**726**	**3521**	**TOTAL**

TABLE IV. OTHER SALMONELLAE REPORTED FROM NONHUMAN SOURCES, MAY, 1971

SEROTYPE	DOMESTIC ANIMALS AND THEIR ENVIRONMENT							ANIMAL FEEDS			
	CHICKENS	TURKEYS	SWINE	CATTLE	HORSES	OTHER	SUBTOTAL	TANKAGE	VEGETABLE PROTEIN	OTHER	SUBTOTAL
agona	1	2					3				—
alachua							—	1			1
albany	1	2					3				—
bornum		1					1				—
brandenburg							—	1			1
california	3						3			1	1
cerro	1	1	2				4	1			1
drypool							—			2	2
dublin				3			3				—
eimsbuettel		2					2				—
essen							—				—
habana							—				—
hartford		1					1				—
jerusalem		2					2				—
johannesburg	3						3				—
kentucky	2						2				—
manila							—	1			1
meleagridis	1	2					3			2	2
minnesota							—			1	1
new-brunswick							—	2			2
ohio							—			1	1
orion		1					1				—
oslo							—				—
pullorum	11						11				—
rubislaw							—				—
siegburg							—	1			1
taksony							—	3			3
thomasville							—	2		1	3
urbana							—				—
welikada							—			1	1
TOTAL	23	14	2	3	—	—	42	12	—	9	21
NOT TYPED*	2	—	—	—	—	—	2	—	—	—	—
TOTAL	25	14	2	3	—	—	44	12	—	9	21

*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				
							–		3	18	*agona*
							–		1	11	*alachua*
							–		3	11	*albany*
							–		1	9	*bornum*
							–		1	1	*brandenburg*
							–	1	5	19	*california*
							–		5	25	*cerro*
							–		2	16	*drypool*
							–		3	18	*dublin*
1		1					1		4	34	*eimsbuettel*
1							–		1	1	*essen*
1							–		1	13	*habana*
							–		1	1	*hartford*
							–		2	2	*jerusalem*
	10						–	1	14	14	*johannesburg*
							–		2	17	*kentucky*
							–		1	4	*manila*
							–		5	24	*meleagridis*
							–		1	4	*minnesota*
							–		2	2	*new-brunswick*
							–		1	4	*ohio*
							–		1	5	*orion*
1							–		1	2	*oslo*
2							–		13	18	*pullorum*
2							–		2	2	*rubislaw*
		5				4	9		10	42	*siegburg*
							–		3	9	*taksony*
							–		3	21	*thomasville*
	1						–		1	12	*urbana*
							–		1	1	*welikada*
8	11	6	–	–	–	4	10	2	94	458	TOTAL
1	1	–	–	–	–	–	–	2	6	70	NOT TYPED*
9	12	6	–	–	–	4	10	4	100	528	TOTAL

TABLE V. SALMONELLAE REPORTED BY GROUP IDENTIFICATION ONLY, MAY, 1971

A. HUMAN SOURCES

REPORTING CENTER	GROUP														TOTAL
	B	C		C1	C2		D	E		F	G		S	UNK	
ALASKA	2			1			1	2						1	7
ARKANSAS				1	1										2
CALIFORNIA	1														1
CONNECTICUT	1													1	2
DISTRICT OF COLUMBIA	2	1		1	1		2							1	8
ILLINOIS	1														1
MARYLAND														1	1
MISSISSIPPI	1														1
NEBRASKA	1			2			1								4
NEVADA	2						1								3
NEW HAMPSHIRE	4			1	1									2	8
NEW MEXICO	5			1	5		3	1			2				17
NEW YORK-A														17	17
RHODE ISLAND	1				1		1							1	4
TEXAS	5			2	3		1			1				4	16
VIRGINIA							1								1
TOTAL	26	1		9	12		11	3		1	2		–	28	93

B. NONHUMAN SOURCES

SOURCES	GROUP														TOTAL
	B	C		C1	C2		D	E		F	G		S	UNK	
DOMESTIC ANIMALS AND THEIR ENVIRONMENT														2	2
ANIMAL FEEDS															–
WILD ANIMALS AND BIRDS													1		1
REPTILES AND ENVIRONMENT														1	1
HUMAN DIETARY ITEMS															–
MISCELLANEOUS														2	2
TOTAL	–	–		–	–		–	–		–	–		1	5	6

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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.

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DHEW Publication No. (HSM) 72-8072 ☆U. S. GOVERNMENT PRINTING OFFICE: 1971–745-346/1522, REGION NO. 4 3E07631171