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Annual Summary 1974  
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CENTER FOR DISEASE CONTROL

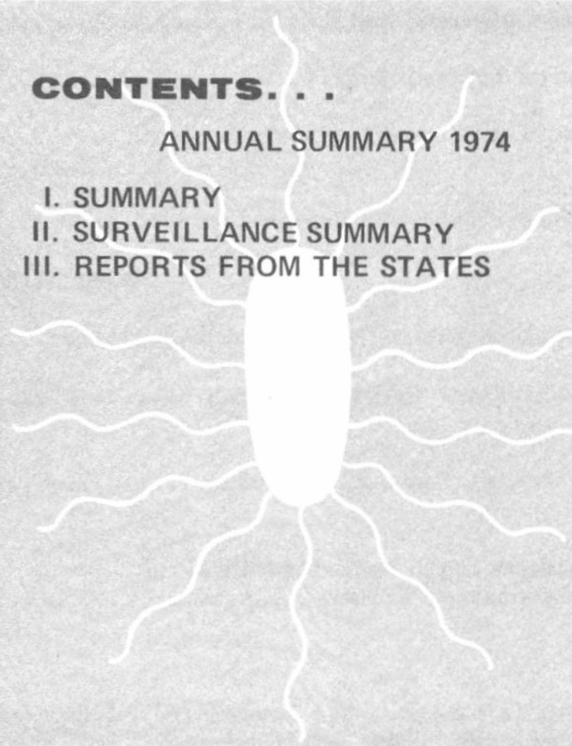
# **SALMONELLA**

**SURVEILLANCE**

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ANNUAL SUMMARY 1974

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# PREFACE

Summarized in this report is information received from state and city health departments, university and hospital laboratories, the U.S. Food and Drug Administration, 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  
Bureau of Epidemiology  
Atlanta, Georgia 30333

## SUGGESTED CITATION

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Center for Disease Control.....David J. Sencer, M.D., Director  
Bureau of Epidemiology.....Philip S. Brachman, M.D., Director  
Bacterial Diseases Division.....John V. Bennett, M.D., Director  
Eugene J. Gangarosa, M.D., Deputy Director  
Enteric Diseases Branch.....Michael H. Merson, M.D., Chief\*  
Eugene J. Gangarosa, M.D., Chief  
Paul A. Blake, M.D., M.P.H., Assistant Chief  
Salmonellosis Surveillance Activity.....Robert W. Ryder, M.D.  
Statistical Services Branch.....Stanley M. Martin, M.S.  
Robert A. Pollard, Jr., M.A.  
Bacterial Zoonoses Branch.....Arnold F. Kaufmann, D.V.M., Chief  
Daniel C. Anderson, D.V.M.  
Epidemiologic Investigations  
Laboratory Branch.....George K. Morris, Ph.D., Chief  
Donald C. Mackel, M.S., Deputy Chief  
Joy Wells, B.S.  
Parasitic Diseases and Veterinary Public Health Division  
Veterinary Public Health Branch.....Richard L. Parker, D.V.M., Chief

\*Through June 1975

August 1975

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## I. SUMMARY

In 1974, 23,838 isolations of salmonella were reported to CDC, a decrease of 2,855 cases (10.7%) from the previous year. As in 1973, Salmonella typhimurium (including S. typhimurium var. copenhagen), S. newport, and S. enteritidis were the first, second, and third most commonly isolated serotypes, respectively.

## II. SURVEILLANCE ACTIVITY

This report summarizes the results of the 13th year (January 1, 1974-December 31, 1974) of the Salmonellosis Surveillance Activity established jointly by the Center for Disease Control and the Associations of State and Territorial Epidemiologists and Laboratory Directors in 1962. The bulwark of the program is the weekly reporting of isolations of salmonella by the 50 states, the District of Columbia, the Salmonella Reference Center, Beth Israel Hospital, New York City, the U. S. Department of Agriculture, and the U. S. Food and Drug Administration. The objectives of this surveillance have been to define endemic patterns of salmonellosis in this country, to detect outbreaks of salmonellosis, particularly those with interstate ramifications, to provide health authorities and policy makers administrative guidelines, and to monitor control efforts.

The Salmonella Surveillance Activity solicits information on outbreaks and other aspects of human and nonhuman salmonellosis from health workers in the private sector and from officials at the local, state, and federal level. Each week, reports of laboratory isolations from the 50 states are reviewed. These reports represent laboratory isolations of salmonella without distinction as to whether they are from clinical or subclinical cases or chronic or convalescent carriers. Cases of salmonellosis not confirmed by culture are not included. These reports are analyzed by state and by serotype to determine whether a particular state or geographic area is experiencing an increase in the number of salmonella isolations of a specific serotype for that particular period.

Many selective factors determine which salmonella infections will be reported. Among these are the severity of infection, the epidemiologic circumstances surrounding the case, accessibility of the patient to a physician, the interest of the physician in obtaining a culture, and the availability and capability of the laboratory. Interpretations of these data are limited by the bias inherent in the data. For example, geographic prevalence and age of patients reported probably reflect "interest factors". Despite these limitations, certain observations are justified, and the data herein provide the basis for comparison with past and future results.

## III. REPORTS FROM THE STATES

### A. Human

Serotype Frequency - A total of 178 different salmonella serotypes were identified and reported in 1974, representing a decrease of 2 over 1973. The 178 serotypes represent approximately 11% of the more than 1,700 known salmonella serotypes and variants.



The 10 most frequently reported serotypes (Table 1) accounted for 16,435 (68.9%) of the 23,838 isolates reported in 1974. Of these 10 serotypes, S. agona showed the greatest rise with a 20.0% increase in the number of isolations reported since 1973. S. oranienburg is new to the list.

Table 1

The 10 Most Frequently Reported Serotypes from Human Sources, 1974

| <u>Serotype</u>      | <u>Number</u> | <u>Percent</u> | <u>Rank Last Year</u> |
|----------------------|---------------|----------------|-----------------------|
| <u>typhimurium</u> * | 7,343         | 30.8           | 1                     |
| <u>newport</u>       | 1,634         | 6.9            | 2                     |
| <u>enteritidis</u>   | 1,431         | 6.0            | 3                     |
| <u>infantis</u>      | 1,283         | 5.4            | 4                     |
| <u>heidelberg</u>    | 1,137         | 4.8            | 6                     |
| <u>agona</u>         | 1,037         | 4.4            | 7                     |
| <u>saint-paul</u>    | 924           | 3.9            | 5                     |
| <u>typhi</u>         | 582           | 2.4            | 8                     |
| <u>derby</u>         | 557           | 2.3            | 9                     |
| <u>oranienburg</u>   | 507           | 2.1            | 13                    |
| <hr/>                |               |                |                       |
| Total                | 16,435        | 68.9           |                       |
| TOTAL                | 23,838        |                |                       |
| (all serotypes)      |               |                |                       |

\*Includes var. copenhagen

Uncommon and Rare Serotypes - Of the 142 uncommon serotypes which were isolated and reported this year, significant increases in the number of isolates were found for S. adelaide, S. bovis-morbificans, S. eastbourne, S. johannesburg, S. london, S. ohio, S. wien, and S. minnesota.

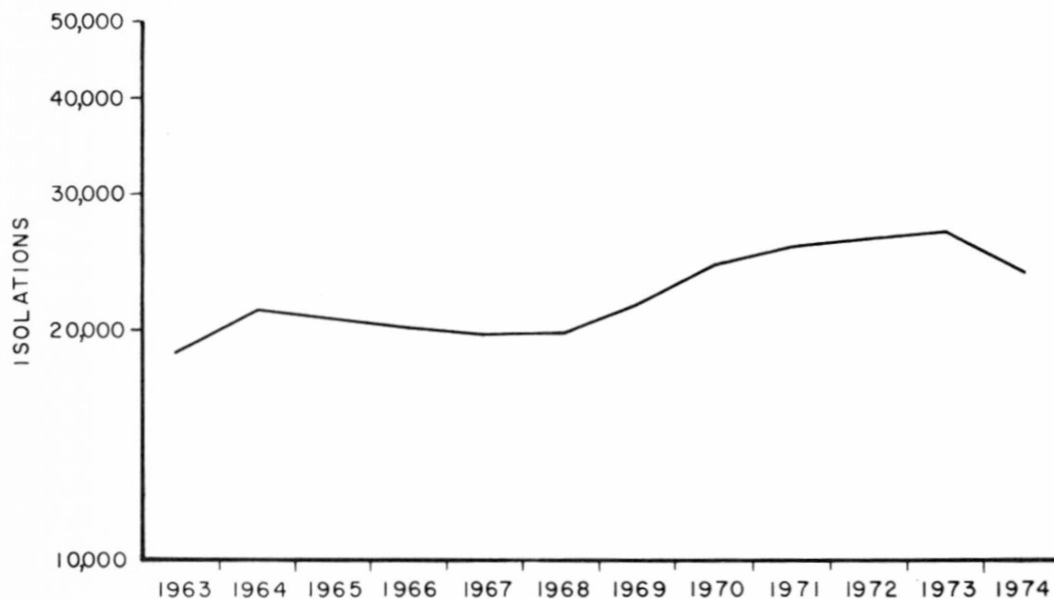
Isolates of S. bovis-morbificans tended to cluster in the Middle Atlantic region, especially in Philadelphia. Epidemiologic investigation of each case failed to reveal a common association. S. london has been isolated more frequently each year over the past 4 years. Isolates first clustered in the Midwest but have now been seen throughout the United States. S. eastbourne was involved in an interstate outbreak in which contaminated chocolate was the source. The candy was recalled by the Food and Drug Administration. Isolates of S. wien, the most common serotype in France, were from persons who apparently acquired their infection while traveling in Europe.

The frequency of isolation of certain serotypes decreased in 1974: these were S. albany, S. oslo, S. poona, S. java, and S. litchfield. The last 3 serotypes have been frequently isolated from pet turtles. This decline probably reflects improved control measures regulating pet turtles, the sale of which is now banned.

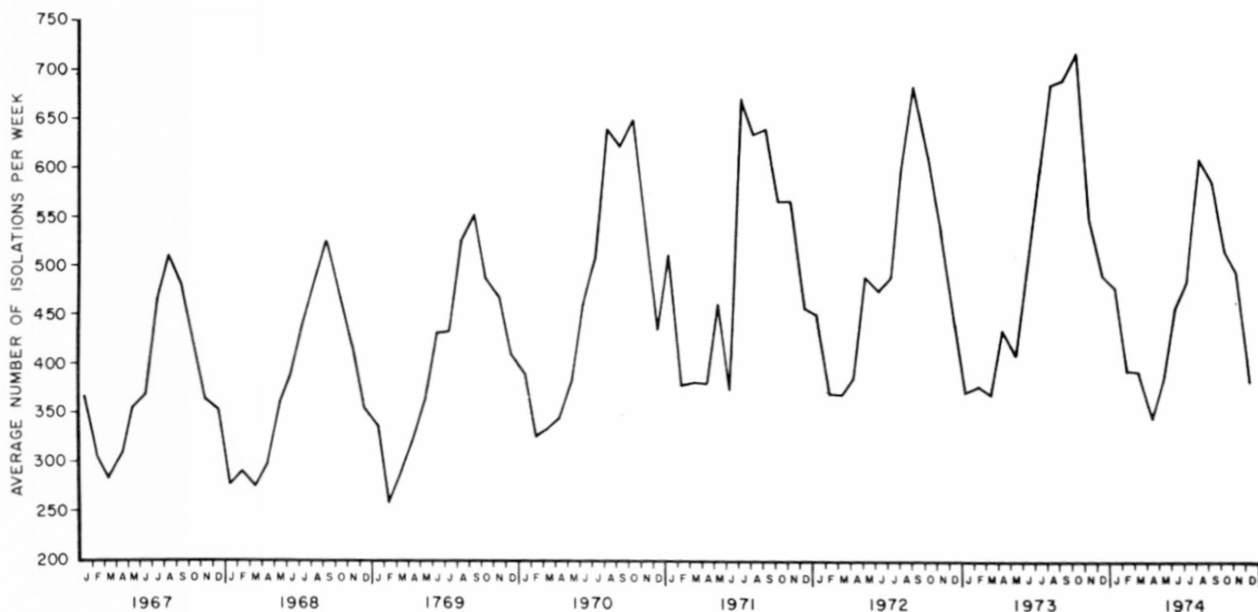
Incidence - The annual incidence of reported isolations of salmonella has remained approximately constant since 1963 (Figure 1).

The seasonal incidence of salmonella isolations for the period 1967-1974 shows a consistent pattern, with the greatest number of isolations reported in July through November and the fewest in February through April (Figure 2).

**Fig. 1** REPORTED HUMAN ISOLATIONS OF SALMONELLAE,  
UNITED STATES, 1963-1974



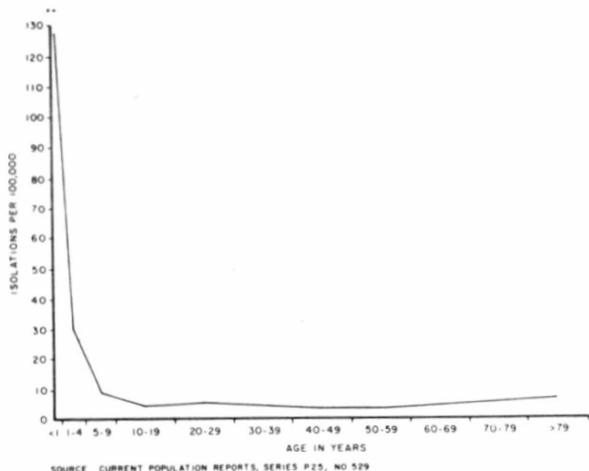
**Fig. 2** REPORTED HUMAN ISOLATIONS OF SALMONELLAE, UNITED STATES, 1967-1974



Age and Sex Distribution - For 17,229 isolations in 1974, the ages of infected persons were reported; 11,517 (66.8%) were from persons less than 20 years of age (Figure 3 and Table III). This was an increase of 0.7% for this age group compared with 1973. In 1974 the number of isolations per 100,000 population in each age group closely approximated that for the years 1963 through 1973.

In 1974 sex was specified for 23,632 persons from whom salmonellae were isolated; 12,033 (50.9%) were male and 11,599 were female. The following table shows this age-sex distribution. A similar age-sex distribution of persons in whom salmonellae infections were reported has been seen in the past 10 years and has been noted in other enteric diseases. This phenomenon is thought to be related to inherently greater susceptibility in males, particularly in infancy, and to disproportionately high exposure of adult females who are more likely to have close contact with sick children. Once again, children less than 5 years of age had the highest incidence of salmonellosis (Figure 3). Children are more likely to have a stool culture taken for reasons noted above.

Fig 3 RATE OF HUMAN ISOLATIONS OF SALMONELLAE, BY AGE GROUP, 1974



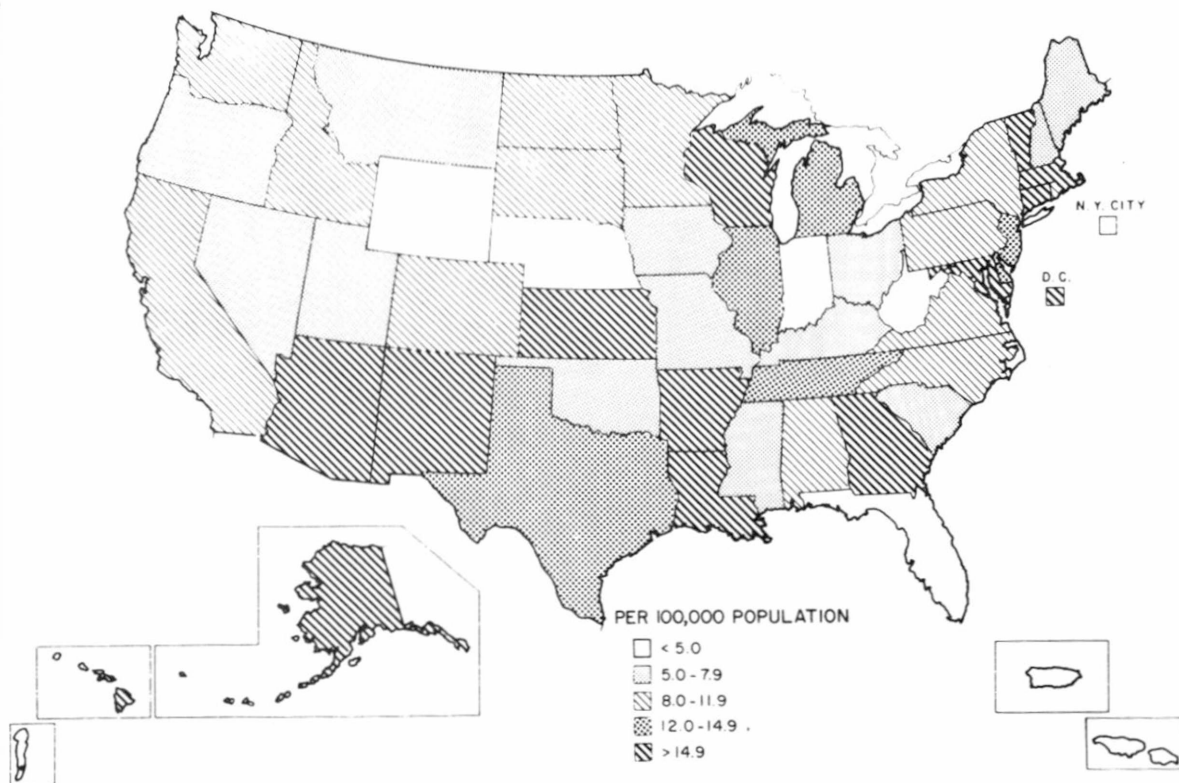
SOURCE: CURRENT POPULATION REPORTS, SERIES P25, NO 529

| <u>Age (Years)</u> | <u>Male</u>   |                | <u>Female</u> |                | <u>Total</u> |
|--------------------|---------------|----------------|---------------|----------------|--------------|
|                    | <u>Number</u> | <u>Percent</u> | <u>Number</u> | <u>Percent</u> |              |
| Less than 20       | 6,260         | 54.5           | 5,224         | 45.5           | 11,484       |
| 20 and over        | 2,497         | 43.7           | 3,212         | 56.3           | 5,709        |
| TOTAL              | 8,757         | 51.0           | 8,436         | 49.0           | 17,193       |

Geographic Patterns - The geographic distribution of salmonella isolations reported in 1974 appears in Figure 4. California with 2,464 isolates reported the most, followed by Texas with 1,674. Other states with more than 1,000 isolates were Georgia, Illinois, Louisiana, Michigan, New Jersey, New York, and Pennsylvania. The incidence for the entire country was 11.3 per 100,000. Hawaii, as in past years, reported the highest incidence with 69.1 per 100,000. Other areas reporting incidence rates higher than 20.0 per 100,000 were Alaska, Georgia, Louisiana, and New Mexico.

Geographic variations among specific serotypes are seen in Tables I and II. Several serotypes had definite regional patterns which have been observed in previous years. Hawaii reported 139 of 144 (96.5%) isolates of S. weltevreden, 114 of 265 (43.0%) isolates of S. panama, and 21 of 43 (48.8%) of S. oslo. The southern states of Florida, Louisiana, Texas, Arkansas, and Georgia accounted for 701 of the 1,634 (42.9%) of S. newport isolates and 293 of 400 (73.3%) isolates of S. javiana. Florida had 14 of the 45 (31.1%) S. miami isolates. The reasons for these geographic characteristics are not clear.

Fig. 4 NUMBER OF HUMAN ISOLATIONS OF SALMONELLAE, UNITED STATES, 1974



**Outbreaks** - In 1974 there were 34 outbreaks of salmonellosis involving at least 4,011 persons reported to CDC. Of the 4,011, 448 (11.1%) were found to have positive cultures. Thus only a small fraction of the reported human isolations of salmonella in 1974 were from reported outbreaks, an observation compatible with the belief that many outbreaks are never investigated or even recognized. Approximately 5.2% of the ill persons were reported to have been hospitalized; 6 deaths were reported for a case-fatality ratio of 0.15%. In the years 1962-1974, 143 deaths were reported in 34,291 persons involved in 499 outbreaks for a case-fatality ratio of 0.42%.

In 18 of the 34 outbreaks a vehicle of transmission was identified: 5 involved poultry, 5 beef or beef products, and 3 dairy products; in 6 outbreaks person-to-person spread was thought to be responsible.

Table 2

## Salmonella Outbreaks Reported to CDC in 1974

This table lists investigated outbreaks of salmonellosis reported to CDC from various sources. Definitions of cases are not uniform from report to report. This listing should be considered neither comprehensive nor representative as most outbreaks are probably not reported to CDC.

| <u>State</u>     | <u>Month</u>     | <u>Location</u> | <u>Serotype</u>                                                  | <u>Ill</u> | <u>Mode of Transmission</u> | <u>Comment</u>                                          |
|------------------|------------------|-----------------|------------------------------------------------------------------|------------|-----------------------------|---------------------------------------------------------|
| Florida          | January          | Miami           | <u>S. senftenberg</u> ,<br><u>S. bareilly</u> , <u>S. agona</u>  | 35         | Food                        | Cruise ship                                             |
| "                | "                | "               | <u>S. senftenberg</u> ,<br><u>S. bareilly</u>                    | 45         | Food                        | Cruise ship                                             |
| "                | January-February | "               | <u>S. senftenberg</u>                                            | 55         | Food                        | Cruise ship                                             |
| Oregon           | January          |                 | <u>S. infantis</u>                                               | 3          | ? cold turkey sandwiches    |                                                         |
| Florida          | February         | Miami           | <u>S. senftenberg</u> ,<br><u>S. bareilly</u> , <u>S. london</u> | 65         | Food                        | Cruise ship                                             |
| Maryland         | "                | Baltimore       | <u>S. saint-paul</u>                                             | 6          | Person-to-person            | Pediatric nursery outbreak                              |
| California       | April            | Los Angeles     | <u>S. typhi</u>                                                  | ~1         | Not known                   | Carrier in household                                    |
| Kentucky         | "                | Louisville      | <u>S. typhimurium</u>                                            | 9          | Person-to-person            | ICU nursery                                             |
| Pennsylvania     | May              | Pittsburgh      | <u>S. typhimurium</u>                                            |            |                             | Same phage type and anti-biogram as Louisville outbreak |
| New York         | "                | Chappaqua       | <u>S. typhi</u>                                                  | 3          | Not known                   | Family outbreak                                         |
| Washington       | June             |                 | <u>S. typhi</u>                                                  | 5          | Not known                   | Carrier in community                                    |
| Mississippi      | June             | Jackson         | <u>S. typhi</u>                                                  | 3          | Not known                   | Carrier in community                                    |
| Pennsylvania     | "                | Sherrystown     | <u>S. manhattan</u>                                              | ~40        | Chicken salad               | Wedding reception                                       |
| Louisiana        | June-July        | Iberia Co.      | <u>S. bredeney</u>                                               | 35         | Chicken salad               | Family picnic                                           |
| Alaska           | July             | Juneau          | <u>S. typhimurium</u>                                            | 32         | Contaminated water          | Trailer camp water                                      |
| Texas            | "                | Jefferson       | <u>S. infantis</u>                                               | 50         | Contaminated kitchen        | Nursing home                                            |
| New York-Chicago | "                |                 | <u>S. typhimurium</u>                                            | 3          | Beef                        | ? spread on commercial train                            |
| New Hampshire    | "                | Gorham          | <u>S. C<sub>1</sub></u>                                          | 16         | Bologna                     | Church camp                                             |
| Indiana          | August           | Kokomo          | <u>S. Gp D</u>                                                   | 30         | Ice cream                   | Homemade                                                |
| Louisiana        | "                | New Orleans     | <u>S. typhimurium</u>                                            | 30         | Common source               | At university cafeteria                                 |
| Indiana          | "                | Howard Co.      | <u>S. enteritidis</u>                                            | ~25        | Ice cream                   | Homemade                                                |

|                |                  |              |                             |       |
|----------------|------------------|--------------|-----------------------------|-------|
| Pennsylvania   | August-September | Philadelphia | <u>S. bovis-morbificans</u> | ~13   |
| Connecticut    | August           | New Britain  | <u>S. wien</u>              | 3     |
| Wisconsin      | "                | Waushara Co. | <u>S. agona</u>             | 5     |
| Arizona        | September        | Flagstaff-   | <u>S. newport</u>           | ~3000 |
| New Mexico     |                  | Gallup       |                             |       |
| Oregon         | "                | IU*          | <u>S. saint-paul</u>        | 7     |
| Pennsylvania   | "                | Schukylil    | <u>S. kottbus</u>           | 25    |
| New Jersey     | October          | Bergen Co.   | <u>S. typhimurium</u>       | 192   |
| South Carolina | "                | Chesterfield | <u>S. javiana</u>           | 1     |
| Washington     | "                | IU           | <u>S. wien</u>              | ?2    |
| Connecticut    | November         | Middleton    | <u>S. oranienburg</u>       | 108   |
| Texas          | November         | IU           | IU                          | ~100  |
| Wisconsin      | "                | Madison      | <u>S. typhimurium</u>       | 2     |
| Connecticut    | "                | New Haven    | <u>S. typhi</u>             | 9     |
| Vermont        | December         | Stowe        | <u>S. enteritidis</u>       | 53    |

7 \*IU - Information unavailable

? continuing exposure

Common exposure

? dog food

Potato salad

IU

Turkey stuffing

Apple cider

Contaminated sewerage

IU

Meatball and spaghetti

Turkey

? dog food

? common source

? hollandaise sauce

One death

? acquired in Europe

Family outbreak

Large Indian reservation  
picnic

Church picnic

Roadside stand

Faulty sewage system

? acquired in Europe

Homemade food at church  
supper

Inadequately cooked

Travelers to Haiti

19/19+ foodhandlers in  
a lodge

TABLE 1 COMMON SALMONELLAE REPORTED FROM HUMAN SOURCES, 1974

| SERO TYPE                  | 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 | IOW | MO  | ND | SD             | NEB | KAN | DEL | MD  | DC  | VA  | WVA | NC  | SC  | GA    | FLA |
| <i>anatum</i>              | 1                                        |    | 1  | 7   |    | 1               | 1   | 6   | 15  | 15    | 12                 | 7   | 4   | 19    | 14    | 7                  | 5   | 1   | 3   | 2  |                |     | 6   |     | 8   |     | 3   | 1   | 7   | 1   | 22    | 2   |
| <i>bareilly</i>            | 4                                        |    |    |     |    |                 |     | 4   |     | 3     |                    | 2   |     | 11    |       | 2                  | 3   |     | 2   |    |                | 6   |     | 1   |     | 6   |     | 1   |     | 4   | 1     |     |
| <i>blockley</i>            | 1                                        |    |    | 14  |    | 8               | 1   | 27  | 27  | 15    | 16                 | 8   | 2   | 8     | 11    | 8                  | 5   | 2   | 6   | 1  |                | 4   | 7   | 13  | 1   | 6   | 2   | 8   | 3   | 13  | 2     |     |
| <i>braenderup</i>          |                                          |    |    | 8   |    | 1               |     | 8   | 3   | 2     | 1                  | 2   | 1   | 8     | 5     | 1                  |     |     |     |    |                |     |     | 1   | 1   | 1   |     | 2   | 1   | 7   |       |     |
| <i>bredeney</i>            |                                          |    |    | 5   |    | 2               |     | 7   | 4   | 8     | 10                 | 3   | 1   | 19    | 6     | 4                  | 3   | 2   | 3   |    |                |     |     | 1   | 1   | 1   | 3   |     | 3   |     | 3     |     |
| <i>chester</i>             |                                          |    |    | 14  | 1  | 3               | 3   |     |     | 4     | 11                 |     |     | 7     |       | 3                  | 1   |     | 1   |    |                |     |     | 1   |     | 2   |     | 3   |     | 1   |       |     |
| <i>cholerae-suis v kun</i> |                                          |    |    |     |    | 2               |     |     |     | 1     |                    | 1   |     | 5     | 2     |                    |     |     | 1   |    |                |     |     | 2   |     |     |     | 4   |     |     |       |     |
| <i>cubana</i>              |                                          |    |    |     |    | 2               |     |     |     | 1     |                    | 1   |     | 4     |       |                    |     |     |     |    |                |     |     |     |     | 2   |     |     |     | 1   |       |     |
| <i>derby</i>               |                                          |    | 3  | 6   |    | 3               |     | 14  | 10  | 12    | 21                 | 39  | 5   | 62    | 49    | 5                  | 1   |     | 7   |    |                | 3   | 4   | 23  |     | 5   |     | 2   |     | 27  | 4     |     |
| <i>enteritidis</i>         | 1                                        |    | 30 | 110 | 6  | 46              | 1   | 107 | 71  | 37    | 88                 | 47  | 30  | 285   | 50    | 33                 | 28  | 16  | 20  | 5  | 2              |     | 21  | 4   | 71  | 2   | 16  | 6   | 35  | 6   | 33    | 5   |
| <i>give</i>                |                                          |    |    | 1   |    | 1               |     | 3   |     |       | 2                  |     |     |       | 2     |                    | 1   |     | 1   |    |                |     |     |     | 2   |     |     | 1   | 1   | 3   |       |     |
| <i>heidelberg</i>          | 17                                       |    | 2  | 47  | 9  | 15              |     | 39  | 21  | 48    | 53                 | 29  | 24  | 111   | 77    | 35                 | 8   | 4   | 18  | 2  | 1              |     | 25  | 3   | 61  | 2   | 43  | 1   | 25  | 7   | 36    | 1   |
| <i>indiana</i>             |                                          |    |    |     |    |                 |     | 2   | 3   | 4     | 4                  | 1   |     | 7     | 1     |                    | 1   |     |     |    |                |     | 4   | 11  |     | 1   |     | 1   |     | 8   | 1     |     |
| <i>infantis</i>            | 2                                        |    |    | 42  |    | 19              | 2   | 40  | 23  | 69    | 59                 | 24  | 8   | 116   | 82    | 54                 | 23  | 4   | 19  | 6  | 1              |     | 26  | 2   | 48  | 2   | 31  | 1   | 31  | 4   | 39    | 7   |
| <i>java</i>                |                                          |    |    | 4   |    | 2               |     | 1   |     |       | 3                  | 3   | 2   | 26    | 4     | 5                  | 8   | 1   | 5   |    |                |     | 9   | 2   | 6   |     | 1   |     | 7   | 1   | 15    | 3   |
| <i>javana</i>              |                                          |    |    | 1   |    |                 |     |     | 1   | 4     | 4                  |     |     | 4     | 6     | 1                  |     | 1   | 3   |    |                |     | 8   | 1   | 2   |     | 1   |     | 7   | 35  | 39    |     |
| <i>litchfield</i>          |                                          |    |    |     |    |                 |     | 6   | 2   | 4     | 4                  | 2   | 3   | 5     | 9     | 2                  | 2   | 1   | 5   |    |                | 3   |     |     |     | 6   |     | 4   |     | 10  | 3     |     |
| <i>livingstone</i>         |                                          |    |    |     | 1  |                 |     |     | 1   |       |                    |     |     |       | 1     |                    | 1   |     |     | 1  |                |     |     |     |     | 1   |     |     |     | 1   |       |     |
| <i>manhattan</i>           | 1                                        |    | 2  | 13  |    | 1               | 1   | 13  | 16  | 24    | 46                 | 11  | 1   | 49    | 21    | 11                 | 1   | 3   | 3   |    |                |     | 1   | 1   | 27  |     | 11  | 1   | 16  |     | 3     | 1   |
| <i>miami</i>               |                                          |    |    |     |    |                 |     |     |     | 2     | 1                  | 1   |     | 4     |       | 9                  |     |     |     |    | 1              |     |     |     |     |     | 1   |     | 1   | 1   | 9     | 14  |
| <i>mississippi</i>         |                                          |    |    |     |    |                 |     |     |     |       |                    |     |     |       | 2     |                    |     |     | 3   |    |                |     |     |     |     |     |     |     | 2   |     | 32    |     |
| <i>montevideo</i>          | 1                                        |    | 1  | 18  |    | 5               | 1   | 7   | 3   | 22    | 21                 | 11  | 4   | 26    | 7     | 9                  |     | 2   | 6   |    |                |     | 11  | 5   | 14  |     | 18  |     | 5   | 1   | 10    | 2   |
| <i>muenchen</i>            |                                          |    |    | 4   |    | 5               |     | 13  | 4   | 5     | 13                 | 3   | 4   | 10    | 17    | 3                  | 2   | 4   | 12  |    | 1              |     | 10  |     | 7   |     | 3   | 3   | 5   | 7   | 28    | 6   |
| <i>newington</i>           |                                          |    |    |     |    | 7               |     |     |     | 2     | 7                  |     |     | 2     |       | 1                  |     |     | 1   |    |                |     |     |     | 1   |     |     |     |     | 1   |       |     |
| <i>newport</i>             | 1                                        |    | 2  | 32  | 1  | 28              |     | 14  | 15  | 51    | 26                 | 26  | 8   | 55    | 52    | 24                 | 11  | 21  | 34  | 4  | 1              |     | 22  | 1   | 13  |     | 20  | 2   | 35  | 23  | 138   | 27  |
| <i>oranienburg</i>         |                                          |    |    | 14  | 1  | 96              |     | 4   | 3   | 13    | 7                  | 8   | 2   | 8     | 15    | 11                 | 1   | 2   | 8   |    | 1              |     | 13  |     | 4   |     | 3   | 1   | 5   | 2   | 42    | 4   |
| <i>panama</i>              |                                          |    | 2  | 4   |    | 2               |     | 5   | 4   | 20    |                    | 6   |     | 8     | 7     | 2                  | 5   |     | 2   |    |                |     |     | 2   | 3   | 1   | 6   |     | 7   |     | 9     |     |
| <i>paratyphi B</i>         |                                          |    |    |     |    | 1               |     | 2   | 1   | 2     |                    | 3   | 2   |       | 8     |                    |     |     |     |    |                |     |     |     |     |     | 5   | 1   | 2   | 1   | 1     |     |
| <i>reading</i>             |                                          |    |    | 4   |    |                 |     |     | 2   | 6     | 7                  |     |     | 5     | 10    | 2                  | 2   | 1   |     |    |                |     |     |     |     |     | 7   |     | 1   |     | 5     | 1   |
| <i>saint-paul</i>          |                                          |    | 1  | 39  |    | 28              |     | 34  | 26  | 49    | 58                 | 37  | 16  | 63    | 68    | 23                 | 10  | 4   | 7   | 6  |                | 7   | 2   | 59  | 2   | 15  | 2   | 23  | 3   | 37  | 3     |     |
| <i>san-diego</i>           |                                          |    |    | 8   |    | 2               |     | 3   | 8   | 3     |                    |     |     | 6     | 15    | 3                  |     |     |     |    |                |     |     | 1   | 1   |     | 1   |     | 1   | 2   | 2     | 1   |
| <i>schwarzengrund</i>      |                                          |    |    | 7   |    | 4               |     |     | 3   | 2     | 10                 | 3   |     | 4     |       | 2                  | 1   |     | 1   | 2  |                |     | 1   | 1   |     |     | 3   |     | 4   |     |       |     |
| <i>senftenberg</i>         |                                          |    |    | 15  |    | 2               |     | 3   | 3   | 5     | 7                  |     | 2   | 6     | 4     |                    | 4   |     | 2   |    |                |     |     |     |     |     | 2   |     | 1   |     | 1     |     |
| <i>tennessee</i>           |                                          |    |    | 1   |    |                 |     | 4   | 1   | 1     | 3                  | 3   |     | 9     | 3     | 2                  | 1   | 1   |     | 1  | 1              |     |     |     |     | 2   |     | 1   | 2   | 4   |       |     |
| <i>thompson</i>            |                                          |    | 1  | 14  |    | 8               |     | 8   | 6   | 21    | 20                 | 9   | 5   | 27    | 20    | 20                 | 18  |     | 11  | 2  | 4              |     | 8   | 1   | 7   | 2   | 13  | 1   | 8   | 2   | 17    | 4   |
| <i>typhi</i>               | 2                                        | 1  | 1  | 17  | 2  | 12              | 26  | 13  | 33  | 15    | 9                  | 11  |     | 29    | 11    | 2                  | 7   | 2   | 5   |    |                |     | 2   | 1   | 8   | 1   | 2   | 7   | 17  | 3   | 5     | 18  |
| <i>typhimurium</i>         | 36                                       |    | 17 | 306 | 30 | 159             | 7   | 142 | 114 | 429   | 372                | 230 | 101 | 435   | 371   | 393                | 154 | 61  | 151 | 16 | 48             |     | 123 | 21  | 160 | 7   | 159 | 18  | 131 | 36  | 309   | 30  |
| <i>typhimurium v cop</i>   | 5                                        |    |    | 30  |    | 19              |     |     |     | 47    |                    |     |     |       | 48    |                    | 1   | 25  |     |    |                |     | 22  | 2   |     |     |     |     | 3   | 1   |       |     |
| <i>weltevreden</i>         |                                          |    |    |     |    |                 |     |     |     | 2     |                    |     |     |       |       |                    |     |     |     |    |                |     |     |     |     |     |     |     |     |     |       |     |
| <i>worthington</i>         | 1                                        |    |    | 3   |    |                 |     |     | 1   |       | 2                  |     | 1   | 3     | 3     | 1                  |     |     |     |    |                |     |     |     |     | 1   |     |     |     |     | 4     |     |
| TOTAL                      | 73                                       | 1  | 63 | 788 | 50 | 485             | 43  | 529 | 424 | 948   | 897                | 531 | 226 | 1,446 | 1,001 | 678                | 308 | 158 | 340 | 48 | 61             | —   | 331 | 63  | 557 | 22  | 397 | 47  | 402 | 115 | 915   | 180 |
| ALL OTHER*                 | 5                                        | 62 | 12 | 90  | 46 | 43              | 353 | 116 | 76  | 127   | 137                | 52  | 25  | 209   | 199   | 84                 | 26  | 57  | 26  | 3  | 5              | 44  | 34  | 8   | 122 | 94  | 50  | 3   | 83  | 23  | 155   | 21  |
| TOTAL                      | 78                                       | 63 | 75 | 878 | 96 | 528             | 396 | 645 | 500 | 1,075 | 1,034              | 583 | 251 | 1,655 | 1,200 | 762                | 334 | 215 | 366 | 51 | 66             | 44  | 365 | 71  | 679 | 116 | 447 | 50  | 485 | 138 | 1,070 | 201 |

Note: NYA—New York, Albany; NYB—Beth Israel Hospital; NYC—New York City.

\*See Table II.



TABLE 1 COMMON SALMONELLAE REPORTED FROM HUMAN SOURCES, 1974—Continued

| GEOGRAPHIC DIVISION AND REPORTING CENTER |     |     |     |                 |       |     |       |          |     |     |     |     |     |     |     |         |     |       |     | 1974<br>TOTAL | % OF<br>1974<br>TOTAL | 1973<br>TOTAL | % OF<br>1973<br>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                        |
| 4                                        | 5   | 2   | 1   | 3               | 15    | 1   | 38    |          |     |     | 1   |     | 12  | 2   |     | 6       | 5   | 49    | 1   | 13            | 329                   | 1.4           | 339                   | 1.3      | <i>anatum</i>              |
|                                          | 1   | 4   | 1   | 3               | 5     | 2   | 1     |          | 2   |     | 3   |     |     | 2   |     |         | 1   | 7     |     |               | 82                    | 0.3           | 113                   | 0.4      | <i>bareilly</i>            |
| 2                                        | 5   | 3   |     | 1               | 9     |     | 16    |          |     |     | 1   |     | 6   | 1   |     |         | 5   | 22    |     | 2             | 292                   | 1.2           | 317                   | 1.2      | <i>blockley</i>            |
| 1                                        |     | 3   |     |                 | 2     |     | 9     |          |     |     | 4   |     |     |     |     | 2       |     | 10    |     | 1             | 85                    | 0.4           | 108                   | 0.4      | <i>braenderup</i>          |
|                                          |     | 1   | 3   |                 | 39    |     | 11    |          |     |     | 4   |     | 3   |     |     |         |     | 23    | 1   | 5             | 179                   | 0.8           | 150                   | 0.6      | <i>bredeney</i>            |
| 2                                        | 1   |     |     |                 |       |     | 1     |          |     |     |     |     | 5   |     |     |         | 4   | 13    | 1   |               | 82                    | 0.3           | 258                   | 1.0      | <i>chester</i>             |
| 1                                        |     |     |     |                 |       |     |       |          |     |     |     |     |     |     |     |         |     | 1     |     |               | 20                    | 0.1           | 26                    | 0.1      | <i>cholerae-suis v kun</i> |
|                                          | 1   | 2   |     |                 |       |     | 2     |          |     |     |     |     | 4   |     |     | 1       |     | 5     |     | 1             | 27                    | 0.1           | 28                    | 0.1      | <i>cubana</i>              |
|                                          | 5   | 8   | 15  | 1               | 16    | 2   | 72    |          |     |     | 4   |     | 5   |     |     | 7       |     | 72    |     | 45            | 557                   | 2.3           | 558                   | 2.1      | <i>derby</i>               |
| 8                                        | 25  | 9   | 1   | 6               | 11    | 8   | 18    | 3        | 5   |     | 9   |     | 8   | 4   | 1   | 17      | 11  | 53    | 8   | 14            | 1,431                 | 6.0           | 1,461                 | 5.5      | <i>enteritidis</i>         |
|                                          | 1   |     |     |                 | 19    |     | 23    |          |     |     | 1   |     | 3   |     |     | 2       |     | 1     |     | 4             | 72                    | 0.3           | 81                    | 0.3      | <i>give</i>                |
| 1                                        | 29  | 13  | 9   | 3               | 28    | 3   | 28    |          | 5   |     | 1   |     | 29  | 9   | 2   | 19      | 13  | 168   | 5   | 8             | 1,137                 | 4.8           | 1,155                 | 4.3      | <i>heidelberg</i>          |
|                                          | 2   | 1   |     |                 | 11    |     | 1     |          |     |     |     |     |     |     |     |         |     | 3     |     |               | 64                    | 0.3           | 74                    | 0.3      | <i>indiana</i>             |
| 8                                        | 37  | 24  | 2   | 7               | 45    | 9   | 101   | 1        | 5   |     | 10  |     | 15  | 5   | 4   | 15      | 21  | 153   | 2   | 35            | 1,283                 | 5.4           | 1,376                 | 5.2      | <i>infantis</i>            |
|                                          | 14  | 5   | 11  | 3               | 11    | 1   | 2     | 1        |     |     | 6   |     | 1   | 1   | 3   |         | 5   | 23    |     | 7             | 202                   | 0.8           | 325                   | 1.2      | <i>java</i>                |
|                                          | 13  | 12  | 8   | 34              | 54    | 3   | 131   |          |     |     | 1   |     | 7   |     | 3   |         | 7   | 9     |     |               | 400                   | 1.7           | 549                   | 2.1      | <i>javiana</i>             |
|                                          | 4   | 4   |     | 1               | 8     |     | 7     |          | 1   |     |     |     | 1   | 1   |     | 2       |     | 3     |     | 1             | 104                   | 0.4           | 168                   | 0.6      | <i>litchfield</i>          |
|                                          | 1   | 2   |     |                 | 1     |     |       |          |     |     | 1   |     | 1   |     |     |         |     | 13    |     | 5             | 31                    | 0.1           | 26                    | 0.1      | <i>livingstone</i>         |
| 4                                        | 5   |     |     | 2               | 30    |     | 10    | 1        |     |     | 1   |     | 3   |     |     | 2       | 2   | 44    |     | 8             | 390                   | 1.6           | 186                   | 0.7      | <i>manhattan</i>           |
|                                          |     | 1   |     |                 |       |     |       |          |     |     |     |     |     |     |     |         |     |       |     |               | 45                    | 0.2           | 61                    | 0.3      | <i>miami</i>               |
|                                          | 13  | 10  | 7   |                 | 50    |     | 8     |          |     |     |     |     |     |     |     |         |     | 1     |     |               | 128                   | 0.5           | 130                   | 0.5      | <i>mississippi</i>         |
| 1                                        | 4   | 6   |     |                 | 11    | 1   | 36    | 1        |     |     | 5   |     | 3   |     | 2   | 13      | 2   | 50    | 1   | 2             | 348                   | 1.5           | 464                   | 1.7      | <i>montevideo</i>          |
| 1                                        | 5   | 17  | 7   | 6               | 29    | 3   | 19    |          |     |     |     |     | 14  |     |     | 4       | 1   | 18    |     | 1             | 294                   | 1.2           | 430                   | 1.6      | <i>muenchen</i>            |
|                                          |     |     |     | 2               | 1     |     | 2     |          |     |     |     |     | 3   |     |     |         | 1   | 8     |     |               | 39                    | 0.2           | 24                    | 0.1      | <i>newington</i>           |
| 5                                        | 33  | 27  | 29  | 72              | 148   | 17  | 316   | 2        | 1   |     | 29  |     | 55  | 5   | 2   | 12      | 4   | 154   | 2   | 34            | 1,634                 | 6.9           | 2,058                 | 7.7      | <i>newport</i>             |
| 6                                        | 5   | 11  |     | 4               | 20    | 10  | 88    |          | 2   |     | 7   |     | 21  |     |     | 8       | 5   | 48    | 2   | 2             | 507                   | 2.1           | 439                   | 1.6      | <i>oranienburg</i>         |
|                                          | 1   |     |     |                 | 2     |     | 13    |          | 1   |     |     |     | 7   |     |     | 6       | 1   | 22    | 3   | 114           | 265                   | 1.1           | 342                   | 1.3      | <i>panama</i>              |
|                                          |     |     |     |                 |       | 2   | 33    |          | 2   |     | 4   |     | 2   |     |     | 4       |     | 9     |     |               | 86                    | 0.4           | 160                   | 0.6      | <i>paratyphi B</i>         |
|                                          |     |     |     | 1               |       |     | 2     |          |     |     |     |     |     |     |     |         | 2   | 3     |     |               | 64                    | 0.3           | 112                   | 0.4      | <i>reading</i>             |
| 9                                        | 15  | 12  | 4   | 4               | 48    | 4   | 53    | 2        | 1   |     | 8   |     | 15  | 5   | 1   | 14      | 24  | 73    | 1   | 9             | 924                   | 3.9           | 1,198                 | 4.5      | <i>saint-paul</i>          |
|                                          | 4   |     |     |                 | 3     |     | 7     | 1        | 1   |     |     |     | 3   |     |     | 4       |     | 56    |     |               | 136                   | 0.6           | 165                   | 0.6      | <i>san-diego</i>           |
|                                          |     |     | 1   | 1               | 10    | 1   | 2     |          |     |     |     |     |     |     |     | 1       |     | 13    |     |               | 77                    | 0.3           | 102                   | 0.4      | <i>schwarzengrund</i>      |
|                                          |     | 3   |     |                 | 2     | 2   | 18    |          |     |     | 5   |     | 3   |     |     | 1       |     | 4     |     | 2             | 97                    | 0.4           | 161                   | 0.6      | <i>senftenberg</i>         |
| 2                                        | 3   |     |     |                 | 3     | 1   | 3     |          |     |     |     |     |     |     |     | 2       |     | 13    |     |               | 67                    | 0.3           | 57                    | 0.2      | <i>tennessee</i>           |
|                                          | 3   | 2   | 2   | 15              | 15    | 6   | 23    | 2        |     |     | 3   |     | 3   | 4   |     | 8       |     | 40    | 7   | 10            | 400                   | 1.7           | 533                   | 2.0      | <i>thompson</i>            |
| 18                                       | 19  |     | 8   | 25              | 23    | 2   | 29    |          | 1   |     | 1   | 13  | 1   |     | 1   | 14      | 2   | 155   | 4   | 4             | 582                   | 2.4           | 680                   | 2.5      | <i>typhi</i>               |
| 84                                       | 217 | 93  | 53  | 74              | 202   | 68  | 319   | 12       | 21  | 1   | 144 |     | 75  | 29  | 12  | 133     | 32  | 755   | 56  | 57            | 7,003                 | 29.4          | 8,348                 | 31.3     | <i>typhimurium</i>         |
| 22                                       | 18  |     |     | 8               | 13    | 6   | 5     | 1        | 26  |     | 9   |     | 7   |     | 5   |         | 15  |       |     | 2             | 340                   | 1.4           | 259                   | 1.0      | <i>typhimurium v cop</i>   |
|                                          |     |     |     |                 |       |     | 1     |          |     |     |     |     | 1   |     |     |         |     | 1     |     | 139           | 144                   | 0.6           | 118                   | 0.4      | <i>weltevreden</i>         |
|                                          | 2   | 2   |     |                 |       |     | 1     |          |     |     |     |     |     |     |     | 2       |     | 9     |     |               | 36                    | 0.2           | 55                    | 0.2      | <i>worthington</i>         |
| 180                                      | 491 | 277 | 162 | 276             | 884   | 152 | 1,449 | 27       | 74  | 1   | 262 | 13  | 316 | 68  | 37  | 301     | 163 | 2,104 | 96  | 523           | 19,983                | 83.8          | 23,194                | 86.9     | TOTAL                      |
| 6                                        | 60  | 53  | 11  | 44              | 163   | 21  | 225   | 24       | 6   | 11  | 17  | 252 | 50  | 12  | 4   | 40      | 11  | 360   | 33  | 62            | 3,855                 |               | 3,499                 |          | ALL OTHER*                 |
| 186                                      | 551 | 330 | 173 | 320             | 1,047 | 173 | 1,674 | 51       | 80  | 12  | 279 | 265 | 366 | 80  | 41  | 341     | 174 | 2,464 | 129 | 585           | 23,838                |               | 26,693                |          | TOTAL                      |

TABLE II. OTHER SALMONELLAE REPORTED FROM HUMAN SOURCES, 1974

| SEROTYPE         | REPORTING CENTER |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
|------------------|------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|----|-----|-----|-----|-----|-----|-----|----|----|----|----|-----|-----|-----|-----|----|-----|---|
|                  | ALA              | ALK | ARI | ARK | CAL | COL | CON | DEL | DC | FLA | GA | HAW | IDA | ILL | IND | IOW | KAN | KY | LA | ME | MD | MAS | MIC | MIN | MIS | MO | MON |   |
| aborigine        |                  |     |     |     | 2   |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| aberside         |                  |     |     |     | 2   |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| adelade          | 23               |     | 17  | 14  | 111 | 5   | 16  | 3   | 2  |     | 38 | 9   |     | 119 | 7   | 17  | 13  | 2  | 64 |    | 82 | 22  | 1   | 8   |     | 10 |     |   |
| adelaide         |                  |     |     |     | 3   |     |     |     |    |     | 2  |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| adelaide         |                  |     | 1   |     | 4   |     |     | 1   |    |     | 5  |     |     | 1   |     |     |     |    | 2  |    | 1  | 1   | 4   |     |     |    |     |   |
| albany           |                  |     |     |     |     |     |     |     |    |     | 1  |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| amager           |                  |     |     |     |     |     |     |     |    |     | 1  |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| amsterdam        |                  |     |     |     | 2   |     |     |     |    |     |    |     |     |     |     | 2   |     |    |    |    |    |     |     |     |     |    | 1   |   |
| atlanta          |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| austrin          |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| balnearfeld      |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| belem            |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| benfica          |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| bera             |                  |     |     | 2   | 1   | 1   |     | 1   |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     | 2   |    |     |   |
| beria            |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| benta            |                  |     |     |     |     |     |     |     |    |     |    | 1   |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| berkenhead       |                  |     |     |     |     |     |     |     |    |     |    | 1   |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| bismum           |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| bouasco          |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| bouso morbillans |                  |     |     |     | 3   |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| bouso morbillans |                  |     |     |     | 7   |     |     | 2   |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| bouso morbillans |                  |     | 1   |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| brazzaville      |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| buitan           |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| california       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| california       | 1                |     |     | 1   | 2   |     |     |     |    |     | 1  |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    | 1   |   |
| cambridge        |                  |     |     |     | 3   |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| cambridge        |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| carrau           |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| carrau           |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| cerro            |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| chivicol         |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| cholerae suis    | 2                |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| clacamas         |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| comcord          |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| corvallis        |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| daytona          |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| del altar        |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| denver           |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| djakarta         | 1                |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| drypool          |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| duhlin           |                  |     |     | 5   | 2   | 3   |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| dureseldorf      |                  |     |     | 2   |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| durban           |                  |     |     |     |     |     |     |     |    | 1   |    | 1   |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| ealing           |                  |     |     |     |     |     |     |     |    |     | 1  |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| eastbourne       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| eimshuettel      | 1                |     | 1   |     | 1   | 6   |     | 2   |    | 1   | 2  |     |     | 12  | 2   | 2   | 1   | 2  |    | 1  | 3  | 4   | 2   | 1   | 8   | 8  | 5   | 4 |
| emsk             |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| eppendorf        |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| essen            |                  |     |     | 1   |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| flint            |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| florida          |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       | 2                |     |     | 1   |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |
| gallinarum       |                  |     |     |     |     |     |     |     |    |     |    |     |     |     |     |     |     |    |    |    |    |     |     |     |     |    |     |   |

\*See Table III.



**TABLE III AGE AND SEX DISTRIBUTION OF INDIVIDUALS FROM WHOM  
ISOLATIONS OF SALMONELLA WERE REPORTED, 1974**

| AGE (YEARS)                    | SEX             |                 | UNKNOWN | TOTAL  | PERCENT | CUMULATIVE PERCENT |
|--------------------------------|-----------------|-----------------|---------|--------|---------|--------------------|
|                                | MALE            | FEMALE          |         |        |         |                    |
| <1 YEAR<br>PERCENT             | 2,087<br>17.3   | 1,849<br>15.9   | 21      | 3,957  | 23.0    | 23.0               |
| 1-4 YRS<br>PERCENT             | 2,220<br>18.4   | 1,789<br>15.4   | 8       | 4,017  | 23.3    | 46.3               |
| 5-9 YRS<br>PERCENT             | 942<br>7.8      | 730<br>6.3      | 2       | 1,674  | 9.7     | 56.0               |
| 10-19 YRS<br>PERCENT           | 1,011<br>8.4    | 856<br>7.4      | 2       | 1,869  | 10.8    | 66.8               |
| 20-29 YRS<br>PERCENT           | 789<br>6.6      | 979<br>8.4      | 0       | 1,768  | 10.3    | 77.1               |
| 30-39 YRS<br>PERCENT           | 421<br>3.5      | 540<br>4.7      | 1       | 962    | 5.6     | 82.7               |
| 40-49 YRS<br>PERCENT           | 330<br>2.7      | 402<br>3.5      | 0       | 732    | 4.2     | 86.9               |
| 50-59 YRS<br>PERCENT           | 307<br>2.6      | 442<br>3.8      | 0       | 749    | 4.3     | 91.3               |
| 60-69 YRS<br>PERCENT           | 344<br>2.9      | 360<br>3.1      | 0       | 704    | 4.1     | 95.4               |
| 70-79 YRS<br>PERCENT           | 205<br>1.7      | 308<br>2.7      | 2       | 515    | 3.0     | 98.4               |
| > 79 YRS<br>PERCENT            | 101<br>0.8      | 181<br>1.6      | 0       | 282    | 1.6     | 100.0              |
| SUBTOTAL<br>PERCENT            | 8,757<br>72.8   | 8,436<br>72.7   | 36      | 17,229 |         |                    |
| CHILD (UNSPECIFIED)<br>PERCENT | 39<br>0.3       | 39<br>0.3       | 12      | 90     |         |                    |
| ADULT (UNSPECIFIED)<br>PERCENT | 45<br>0.4       | 108<br>0.9      | 0       | 153    |         |                    |
| UNKNOWN<br>PERCENT             | 3,192<br>26.5   | 3,016<br>26.0   | 160     | 6,368  |         |                    |
| TOTAL<br>PERCENT               | 12,033<br>100.0 | 11,599<br>100.0 | 208     | 23,840 |         |                    |

TABLE IV. SALMONELLA ISOLATIONS FROM HUMAN SOURCES BY SEROTYPE AND YEAR, 1968-1974

| SEROTYPE                          | 1968  | 1969  | 1970  | 1971  | 1972  | 1973  | 1974  |
|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|
| <i>aba</i>                        |       | 3     |       | 1     |       | 0     | 0     |
| <i>abacetus</i>                   |       | 1     |       |       |       | 0     | 1     |
| <i>abertown</i>                   | 1     | 1     | 2     |       | 1     | 0     | 3     |
| <i>abony</i>                      |       |       | 1     | 2     | 1     | 1     | 0     |
| <i>abortus-bovis</i>              |       |       | 2     | 1     |       | 1     | 0     |
| <i>accra</i>                      | 1     |       |       |       |       |       | 0     |
| <i>adelade</i>                    | 1     |       | 5     | 1     | 3     | 1     | 12    |
| <i>agama</i>                      |       |       |       |       | 1     | 1     | 0     |
| <i>agona</i>                      |       |       | 4     | 44    | 524   | 864   | 1,037 |
| <i>ahaza</i>                      | 1     |       |       |       |       |       | 0     |
| <i>akanji</i>                     |       |       | 1     |       |       |       | 0     |
| <i>alabama</i>                    | 1     |       |       |       |       |       | 0     |
| <i>alachua</i>                    | 23    | 15    | 10    | 16    | 8     | 19    | 34    |
| <i>albany</i>                     | 18    | 16    | 31    | 18    | 44    | 47    | 30    |
| <i>albuquerque</i>                |       | 1     |       |       |       |       | 0     |
| <i>allendale</i>                  |       | 1     |       |       | 1     |       | 0     |
| <i>altona</i>                     |       |       | 1     |       |       |       | 0     |
| <i>amager</i>                     | 1     | 29    | 5     | 4     | 2     | 3     | 3     |
| <i>amersfoort</i>                 | 1     |       |       | 1     |       |       | 0     |
| <i>amounderness</i>               |       |       |       |       | 1     |       | 0     |
| <i>amsterdam</i>                  |       |       | 1     | 2     | 2     | 2     | 5     |
| <i>anatum</i>                     | 209   | 182   | 262   | 309   | 373   | 339   | 329   |
| <i>arechavaleta</i>               | 1     | 2     | 1     | 1     | 2     | 2     | 0     |
| <i>arkansas</i>                   |       | 1     |       |       |       |       | 0     |
| <i>atlanta</i>                    | 10    | 15    | 17    | 19    | 17    | 4     | 2     |
| <i>austin</i>                     |       |       |       |       | 1     | 2     | 1     |
| <i>azteca</i>                     |       | 1     |       | 2     | 1     |       | 0     |
| <i>bahelsberg</i>                 |       |       | 1     |       |       |       | 0     |
| <i>bahrenfeld</i>                 |       |       |       |       | 1     |       | 1     |
| <i>ball</i>                       |       |       | 1     |       |       |       | 0     |
| <i>barclay</i>                    | 95    | 74    | 72    | 51    | 79    | 13    | 82    |
| <i>bedford</i>                    |       |       |       |       |       | 1     | 0     |
| <i>belem</i>                      |       | 3     |       |       | 1     |       | 1     |
| <i>benfica</i>                    |       |       | 1     |       | 2     | 1     | 1     |
| <i>berc</i>                       |       |       |       |       |       |       | 3     |
| <i>berlin</i>                     | 5     | 2     |       | 1     | 2     | 1     | 1     |
| <i>bern</i>                       | 1     |       |       | 1     |       |       | 1     |
| <i>berta</i>                      | 30    | 40    | 70    | 101   | 48    | 24    | 17    |
| <i>bictri</i>                     |       |       |       |       |       | 1     | 0     |
| <i>binza</i>                      | 6     | 9     | 9     | 11    | 11    | 5     | 13    |
| <i>birkenhead</i>                 |       |       |       | 1     | 1     | 1     | 1     |
| <i>bispebjerg</i>                 |       |       |       |       | 1     |       | 0     |
| <i>blegdam</i>                    | 1     |       |       | 1     |       |       | 0     |
| <i>blockley</i>                   | 487   | 505   | 660   | 586   | 452   | 317   | 292   |
| <i>bonatre</i>                    |       | 1     |       | 1     |       |       | 0     |
| <i>bonariensis</i>                |       | 1     | 1     | 3     | 1     |       | 0     |
| <i>bonn</i>                       |       |       | 1     |       |       |       | 0     |
| <i>bornum</i>                     |       |       |       |       | 4     |       | 4     |
| <i>bouso</i>                      |       |       |       |       | 2     |       | 1     |
| <i>bovis-morbificans</i>          | 2     | 10    | 33    | 26    | 29    | 19    | 60    |
| <i>bradford</i>                   | 2     | 2     | 3     | 1     | 1     |       | 0     |
| <i>braenderup</i>                 | 139   | 78    | 92    | 126   | 132   | 108   | 85    |
| <i>brancaster</i>                 |       | 2     |       |       |       |       | 0     |
| <i>brandenburg</i>                | 5     | 4     | 5     | 8     | 10    | 5     | 14    |
| <i>bredenev</i>                   | 172   | 130   | 196   | 191   | 208   | 159   | 179   |
| <i>bristol</i>                    |       |       | 1     | 3     |       |       | 0     |
| <i>brunei</i>                     |       | 1     |       | 1     |       | 2     | 0     |
| <i>bukavu</i>                     |       | 2     |       |       | 1     |       | 0     |
| <i>businga</i>                    |       | 1     |       |       |       |       | 0     |
| <i>cairo</i>                      |       |       |       |       |       | 1     | 2     |
| <i>california</i>                 | 22    | 13    | 32    | 13    | 24    | 18    | 18    |
| <i>cambridge</i>                  |       | 1     |       | 1     |       |       | 3     |
| <i>canada</i>                     |       |       |       |       |       | 1     | 0     |
| <i>canastel</i>                   |       | 3     | 1     |       |       |       | 0     |
| <i>canoga</i>                     |       |       | 1     |       | 1     | 1     | 1     |
| <i>caracas</i>                    |       |       | 2     |       |       |       | 0     |
| <i>carno</i>                      |       | 1     |       |       |       |       | 0     |
| <i>carrau</i>                     | 2     | 3     | 5     | 5     | 2     |       | 3     |
| <i>cerro</i>                      | 12    | 25    | 23    | 23    | 19    | 25    | 24    |
| <i>chailey</i>                    |       |       | 3     |       |       | 1     | 0     |
| <i>chameleon</i>                  |       | 1     |       |       |       |       | 0     |
| <i>charity</i>                    |       |       | 1     |       |       |       | 0     |
| <i>chester</i>                    | 58    | 52    | 87    | 61    | 132   | 258   | 82    |
| <i>chincol</i>                    |       |       |       |       |       |       | 1     |
| <i>chingola</i>                   |       |       |       | 1     |       |       | 1     |
| <i>chittagong</i>                 |       |       |       | 2     | 1     |       | 0     |
| <i>cholerae-suis</i>              | 15    | 12    | 11    | 13    | 17    | 10    | 20    |
| <i>cholerae-suis v kunzendorf</i> | 29    | 15    | 24    | 24    | 25    |       | 20    |
| <i>christiansborg</i>             |       |       | 1     | 1     |       | 1     | 0     |
| <i>clackamas</i>                  |       |       |       |       |       |       | 2     |
| <i>claihornei</i>                 |       | 1     | 1     | 1     |       |       | 0     |
| <i>clifton</i>                    |       |       | 1     | 2     | 4     | 1     | 0     |
| <i>coeln</i>                      | 3     | 1     | 5     |       |       |       | 0     |
| <i>coileypark</i>                 | 2     | 1     | 1     | 1     | 4     | 2     | 0     |
| <i>colindale</i>                  |       |       |       | 2     |       |       | 0     |
| <i>colorado</i>                   |       | 1     | 1     | 1     | 2     | 1     | 0     |
| <i>concord</i>                    | 3     |       | 5     | 1     |       |       | 1     |
| <i>corvallis</i>                  |       |       |       | 1     |       | 2     | 1     |
| <i>cubana</i>                     | 59    | 145   | 166   | 257   | 68    | 28    | 27    |
| <i>daytona</i>                    | 1     | 2     |       |       | 1     | 2     | 1     |
| <i>decatour</i>                   | 1     |       |       | 1     | 2     |       | 1     |
| <i>degania</i>                    |       | 1     | 2     |       |       |       | 0     |
| <i>denver</i>                     |       |       |       | 1     | 1     | 2     | 4     |
| <i>derby</i>                      | 411   | 335   | 490   | 534   | 628   | 558   | 557   |
| <i>djakarta</i>                   |       |       |       |       |       |       | 1     |
| <i>drypool</i>                    | 6     | 12    | 10    | 19    | 17    | 19    | 17    |
| <i>dublin</i>                     | 11    | 7     | 8     | 24    | 31    | 29    | 42    |
| <i>duesseldorf</i>                | 3     | 6     | 14    | 7     | 20    | 23    | 24    |
| <i>duisburg</i>                   |       |       |       |       | 1     | 1     | 0     |
| <i>durban</i>                     | 2     |       |       | 2     | 1     | 3     | 1     |
| <i>durham</i>                     |       |       |       |       |       |       | 0     |
| <i>ealing</i>                     |       |       |       |       |       |       | 1     |
| <i>eastbourne</i>                 | 1     | 5     | 7     | 9     | 4     | 9     | 111   |
| <i>edinburg</i>                   |       |       | 1     | 2     | 1     |       | 0     |
| <i>eimsbuettel</i>                | 5     | 33    | 21    | 19    | 28    | 23    | 10    |
| <i>elisabethville</i>             |       |       |       |       | 2     |       | 0     |
| <i>elmorane</i>                   |       | 1     |       |       |       |       | 0     |
| <i>emek</i>                       |       |       |       |       |       | 1     | 1     |
| <i>emmastad</i>                   |       |       |       |       | 1     | 1     | 0     |
| <i>enteritidis</i>                | 1,740 | 1,988 | 2,504 | 2,249 | 1,690 | 1,461 | 1,431 |
| <i>eppendorf</i>                  |       |       |       |       |       |       | 1     |
| <i>essen</i>                      | 2     | 1     |       |       |       | 1     | 1     |
| <i>fayed</i>                      | 1     | 1     | 1     |       |       |       | 0     |
| <i>flint</i>                      |       |       | 3     |       |       |       | 1     |
| <i>florida</i>                    | 1     | 2     | 1     | 4     | 2     | 1     | 1     |
| <i>fresno</i>                     | 2     |       |       |       |       |       | 0     |
| <i>friedenau</i>                  |       |       |       |       | 1     |       | 0     |
| <i>frintrop</i>                   |       |       |       |       | 1     | 1     | 0     |

TABLE IV. SALMONELLA ISOLATIONS FROM HUMAN SOURCES BY SEROTYPE AND YEAR, 1968-1974—Continued

| SEROTYPE              | 1968  | 1969  | 1970  | 1971  | 1972  | 1973  | 1974  |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|
| <i>gallinarum</i>     | 1     | 3     | 3     | 4     | 2     | 3     | 1     |
| <i>gaminara</i>       | 16    | 14    | 17    | 21    | 35    | 36    | 30    |
| <i>garoli</i>         |       | 2     |       |       |       |       | 0     |
| <i>gator</i>          | 3     | 2     | 1     | 11    |       | 3     | 1     |
| <i>gatorini</i>       | 1     | 2     | 1     |       |       |       | 1     |
| <i>gdansk</i>         |       |       |       |       |       | 1     | 0     |
| <i>georgia</i>        | 1     | 3     | 1     | 2     | 1     |       | 3     |
| <i>give</i>           | 65    | 74    | 83    | 86    | 95    | 81    | 72    |
| <i>glostrup</i>       | 1     |       | 1     | 1     | 1     | 1     | 1     |
| <i>goeteborg</i>      |       |       |       |       |       |       | 0     |
| <i>goettingen</i>     |       |       |       |       |       | 2     | 0     |
| <i>gombe</i>          |       |       |       |       |       |       | 2     |
| <i>good</i>           | 1     |       | 2     |       |       | 1     | 0     |
| <i>grumpensis</i>     | 2     | 3     |       | 5     | 4     | 2     | 3     |
| <i>habana</i>         | 7     | 15    | 6     | 17    | 19    | 23    | 20    |
| <i>hedar</i>          | 1     |       |       |       |       |       | 0     |
| <i>haddon</i>         |       |       |       |       |       |       | 1     |
| <i>haganbeck</i>      | 1     |       |       |       |       |       | 0     |
| <i>haifa</i>          |       |       | 1     | 3     | 4     | 2     | 2     |
| <i>halmstad</i>       |       |       |       |       | 2     |       | 0     |
| <i>hamburg</i>        |       |       | 1     | 1     | 1     | 1     | 0     |
| <i>harmelen</i>       |       |       |       |       | 1     |       | 0     |
| <i>hartford</i>       | 16    | 41    | 24    | 38    | 30    | 42    | 29    |
| <i>hato</i>           |       | 2     |       |       |       |       | 0     |
| <i>heidelberg</i>     | 1,326 | 1,428 | 1,699 | 1,660 | 1,465 | 1,622 | 1,137 |
| <i>heilbron</i>       | 1     | 2     |       | 1     | 6     |       | 0     |
| <i>hidalgo</i>        |       |       |       |       |       | 1     | 0     |
| <i>hofit</i>          |       |       |       |       |       |       | 1     |
| <i>holcomb</i>        |       |       | 1     |       |       |       | 0     |
| <i>homosassa</i>      |       |       |       | 1     |       |       | 0     |
| <i>horsham</i>        |       |       |       | 1     |       |       | 0     |
| <i>houten</i>         |       |       |       | 1     |       |       | 0     |
| <i>hvittingfoss</i>   | 1     |       |       | 1     | 2     | 6     | 3     |
| <i>ibadan</i>         | 1     | 5     | 8     | 12    | 8     | 10    | 22    |
| <i>indiana</i>        | 84    | 93    | 109   | 107   | 154   | 74    | 64    |
| <i>infantis</i>       | 945   | 1,096 | 1,214 | 1,421 | 1,657 | 1,376 | 1,283 |
| <i>inverness</i>      | 2     | 6     | 6     | 10    | 7     | 15    | 5     |
| <i>irumu</i>          | 2     | 5     | 10    | 3     | 2     | 2     | 1     |
| <i>isangi</i>         |       |       |       |       | 2     | 1     | 0     |
| <i>ituri</i>          |       |       |       | 1     | 1     | 1     | 0     |
| <i>jamaica</i>        |       |       | 1     |       |       |       | 0     |
| <i>jangwani</i>       |       | 1     |       |       | 1     |       | 0     |
| <i>java</i>           | 199   | 173   | 459   | 584   | 464   | 325   | 202   |
| <i>javana</i>         | 518   | 465   | 420   | 516   | 563   | 549   | 400   |
| <i>johannesburg</i>   | 9     | 9     | 7     | 5     | 19    | 16    | 34    |
| <i>kaapstad</i>       | 4     |       | 3     | 11    | 17    | 11    | 5     |
| <i>kentucky</i>       | 17    | 30    | 55    | 34    | 36    | 35    | 33    |
| <i>kibusi</i>         |       |       |       |       | 1     |       | 0     |
| <i>kingston</i>       |       |       |       |       | 1     |       | 0     |
| <i>kintambo</i>       | 1     |       |       |       |       |       | 0     |
| <i>kottbus</i>        | 5     | 14    | 53    | 67    | 185   | 65    | 58    |
| <i>krefeld</i>        |       |       |       | 3     | 3     |       | 0     |
| <i>kumasi</i>         |       |       | 1     |       |       |       | 0     |
| <i>kunduchi</i>       |       |       |       |       |       |       | 1     |
| <i>kuru</i>           |       |       |       |       |       | 1     | 0     |
| <i>lanka</i>          | 2     | 1     |       |       |       |       | 1     |
| <i>lansing</i>        |       |       | 1     |       |       |       | 0     |
| <i>larochelle</i>     |       |       |       | 1     | 2     | 2     | 0     |
| <i>lawndale</i>       | 1     | 1     |       |       |       |       | 0     |
| <i>lexington</i>      |       | 2     | 5     | 8     | 10    | 4     | 5     |
| <i>lille</i>          |       |       |       | 1     |       | 6     | 2     |
| <i>lindenburg</i>     | 2     | 2     | 3     | 1     | 2     | 1     | 2     |
| <i>lindern</i>        |       |       |       |       |       |       | 2     |
| <i>litchfield</i>     | 93    | 124   | 182   | 161   | 173   | 168   | 104   |
| <i>livingstone</i>    | 44    | 35    | 30    | 59    | 53    | 26    | 31    |
| <i>llandoff</i>       | 1     |       |       |       |       |       | 0     |
| <i>loma-linda</i>     | 5     | 1     | 4     | 3     | 3     | 9     | 4     |
| <i>lomita</i>         | 6     | 15    | 20    | 13    | 5     | 3     | 0     |
| <i>london</i>         | 1     | 16    | 26    | 64    | 88    | 177   | 227   |
| <i>los angeles</i>    |       | 1     |       |       |       |       | 0     |
| <i>lovelace</i>       |       |       | 1     |       |       |       | 0     |
| <i>luciana</i>        | 2     |       | 2     | 1     | 2     | 4     | 5     |
| <i>madelia</i>        | 6     | 11    | 1     | 4     | 9     | 7     | 3     |
| <i>manchester</i>     | 4     | 2     | 6     | 2     | 2     | 2     | 4     |
| <i>manhattan</i>      | 200   | 253   | 340   | 420   | 324   | 186   | 390   |
| <i>manila</i>         | 2     |       |       |       |       | 2     | 1     |
| <i>maracaibo</i>      |       | 2     | 1     |       |       |       | 0     |
| <i>marina</i>         |       |       |       |       |       | 1     | 0     |
| <i>maricopa</i>       |       |       |       |       | 1     |       | 0     |
| <i>matadi</i>         |       |       |       | 2     | 3     |       | 0     |
| <i>meleagridis</i>    | 4     | 14    | 26    | 26    | 20    | 18    | 19    |
| <i>memphis</i>        |       |       |       |       |       | 1     | 0     |
| <i>mendoza</i>        |       |       |       |       |       |       | 1     |
| <i>menhaden</i>       |       |       |       |       |       |       | 1     |
| <i>menston</i>        |       |       |       |       |       | 2     | 0     |
| <i>miami</i>          | 118   | 106   | 71    | 94    | 88    | 61    | 45    |
| <i>michigan</i>       |       | 2     |       |       |       |       | 0     |
| <i>mikawashima</i>    |       |       | 1     | 3     | 3     | 2     | 0     |
| <i>minneapolis</i>    | 19    | 27    | 34    | 30    | 45    | 23    | 0     |
| <i>minnesota</i>      |       |       |       |       |       |       | 25    |
| <i>mishmar-haemek</i> |       |       |       |       | 1     | 1     | 0     |
| <i>mission</i>        | 1     | 3     | 1     | 4     | 3     | 3     | 5     |
| <i>mississippi</i>    | 50    | 45    | 66    | 65    | 107   | 130   | 128   |
| <i>missouri</i>       | 1     |       |       |       | 3     |       | 0     |
| <i>mobeni</i>         |       |       |       |       | 1     |       | 0     |
| <i>molade</i>         |       |       | 7     | 7     | 3     | 5     | 7     |
| <i>montevideo</i>     | 271   | 314   | 394   | 375   | 363   | 464   | 348   |
| <i>muenchen</i>       | 211   | 242   | 276   | 389   | 426   | 430   | 294   |
| <i>moscow</i>         |       |       |       |       |       |       | 1     |
| <i>muenster</i>       | 32    | 40    | 25    | 26    | 30    | 25    | 30    |
| <i>mundonobo</i>      |       | 1     |       |       |       |       | 0     |
| <i>nachshonim</i>     | 1     |       |       |       |       |       | 0     |
| <i>napoli</i>         |       | 1     |       |       |       |       | 0     |
| <i>nashua</i>         |       | 1     |       |       |       |       | 0     |
| <i>nchanga</i>        | 7     |       |       | 1     |       |       | 0     |
| <i>ness-ziona</i>     |       |       |       |       |       | 1     | 0     |
| <i>neumunster</i>     |       | 1     | 1     |       |       |       | 0     |
| <i>new-brunswick</i>  | 5     | 10    | 5     | 6     | 35    | 7     | 7     |
| <i>newington</i>      | 44    | 32    | 48    | 41    | 43    | 24    | 39    |
| <i>newlands</i>       |       |       |       | 3     |       |       | 0     |
| <i>new mexico</i>     |       |       |       |       | 1     | 1     | 1     |
| <i>newport</i>        | 1,248 | 1,611 | 1,700 | 1,722 | 2,201 | 2,058 | 1,634 |
| <i>nienstedten</i>    |       |       |       | 1     | 1     | 3     | 2     |

TABLE IV. SALMONELLA ISOLATIONS FROM HUMAN SOURCES BY SEROTYPE AND YEAR, 1968-1974 - Continued

| SEROTYPE                   | 1968  | 1969  | 1970  | 1971  | 1972  | 1973  | 1974  |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|
| nigeria                    |       |       |       | 1     |       |       | 0     |
| norwich                    | 41    | 24    | 22    | 31    | 37    | 34    | 51    |
| nottingham                 |       |       | 3     |       |       | 1     | 0     |
| ohio                       | 1     | 16    | 8     | 15    | 16    | 15    | 42    |
| onderstepoort              | 1     |       |       | 2     | 1     |       | 1     |
| orangerburg                | 295   | 266   | 399   | 412   | 621   | 399   | 507   |
| ordoviz                    |       |       | 12    | 2     | 1     | 1     | 2     |
| orion                      | 6     | 4     | 6     | 2     | 3     |       | 2     |
| ortamycin                  | 1     | 1     | 1     | 3     |       |       | 9     |
| oso                        | 14    | 19    | 27    | 43    | 23    | 60    | 43    |
| panama                     | 230   | 331   | 236   | 286   | 229   | 342   | 265   |
| papuaia                    |       | 1     | 1     | 1     |       |       | 0     |
| paratyphi A                | 13    | 14    | 5     | 14    | 10    | 20    | 30    |
| paratyphi B                | 114   | 166   | 205   | 241   | 208   | 160   | 86    |
| paratyphi B v. odense      | 4     | 3     |       |       |       |       | 0     |
| paratyphi C                | 2     |       | 2     |       | 1     |       | 0     |
| penicola                   | 13    | 3     | 9     | 9     | 9     | 12    | 10    |
| pharr                      | 1     |       |       |       |       |       | 0     |
| phoenix                    |       | 1     |       |       | 4     | 1     | 1     |
| pomona                     | 3     | 6     | 3     | 3     | 4     | 6     | 5     |
| poona                      | 75    | 81    | 93    | 97    | 95    | 141   | 82    |
| portland                   |       |       |       |       |       | 1     | 0     |
| portsmouth                 | 1     |       |       |       |       |       | 0     |
| potsdam                    | 1     | 1     | 4     |       | 9     | 3     | 1     |
| praha                      |       |       | 2     |       |       |       | 0     |
| pullorum                   | 1     | 1     | 5     |       |       | 3     | 2     |
| putten                     |       |       |       |       |       | 4     | 0     |
| ramat-gan                  |       |       | 1     |       |       |       | 0     |
| reading                    | 74    | 68    | 147   | 172   | 96    | 112   | 64    |
| redlands                   |       |       |       |       | 1     |       | 0     |
| remo                       |       |       |       |       | 2     |       | 2     |
| richmond                   |       | 2     | 3     | 1     | 1     | 3     | 2     |
| riogrande                  |       |       |       |       | 2     |       | 0     |
| rubislaw                   | 33    | 30    | 27    | 29    | 31    | 58    | 43    |
| rutgers                    |       |       | 2     | 1     |       |       |       |
| saint-paul                 | 1,143 | 986   | 1,157 | 919   | 1,013 | 737   | 924   |
| salford                    |       |       |       |       | 1     |       | 0     |
| salinas                    |       |       |       |       | 1     |       | 0     |
| san-diego                  | 106   | 118   | 234   | 147   | 308   | 122   | 136   |
| san-juan                   |       | 2     | 2     |       |       |       | 3     |
| saphra                     | 20    | 14    | 15    | 14    | 11    | 12    | 21    |
| sarajane                   |       |       |       |       |       | 2     | 0     |
| schwenberg                 | 1     |       |       |       |       |       | 0     |
| schwarzengrund             | 55    | 89    | 56    | 85    | 58    | 71    | 77    |
| seegefeld                  |       |       |       | 1     |       |       |       |
| soefenberg                 | 65    | 78    | 86    | 219   | 219   | 72    | 97    |
| sevdai                     |       | 2     |       |       |       | 6     | 1     |
| shanghai                   |       |       |       |       |       |       | 1     |
| shipey                     |       | 1     | 1     |       | 1     |       | 0     |
| shuba                      |       |       | 1     |       |       |       | 0     |
| siegburg                   | 8     | 25    | 55    | 69    | 55    | 51    | 77    |
| simsbury                   | 6     | 19    | 9     | 8     | 6     | 11    | 6     |
| singapore                  |       | 1     |       | 1     |       | 4     | 6     |
| sinstorj                   |       |       |       |       | 2     | 3     | 1     |
| springs                    |       |       |       | 1     |       |       | 0     |
| stanley                    | 7     | 13    | 13    | 17    | 10    | 18    | 23    |
| stanleyville               |       | 1     |       |       |       |       | 0     |
| stockholm                  |       | 5     |       |       |       |       | 0     |
| suberu                     |       |       | 1     |       |       |       | 0     |
| sundsvall                  |       |       | 1     | 2     | 4     | 2     | 1     |
| takoradi                   |       |       |       |       |       |       | 1     |
| taksony                    |       |       |       |       |       |       | 5     |
| tallahassee                | 8     | 12    | 8     | 5     |       |       | 17    |
| tananarive                 |       |       |       |       |       |       | 1     |
| tel-el-kebir               |       | 1     |       |       |       |       | 1     |
| tennessee                  | 85    | 43    | 54    | 76    | 52    | 57    | 67    |
| texas                      |       |       | 1     | 1     |       |       | 1     |
| thomasville                | 1     | 4     | 7     | 3     | 16    | 2     | 6     |
| thompson                   | 673   | 1,056 | 958   | 834   | 675   | 533   | 400   |
| tosamanga                  |       |       |       | 1     |       |       | 0     |
| tournai                    |       |       |       |       | 1     |       | 0     |
| tucson                     |       |       |       | 1     | 1     |       | 0     |
| tuebingen                  |       |       |       |       | 1     |       | 0     |
| tuindorp                   |       |       |       |       |       |       | 1     |
| typhi                      | 609   | 549   | 533   | 583   | 535   | 680   | 582   |
| typhi-murium               | 5,147 | 5,514 | 5,640 | 6,525 | 6,460 | 8,348 | 7,003 |
| typhi-murium v. copenhagen | 316   | 259   | 277   | 353   | 278   | 259   | 340   |
| uganda                     | 1     | 1     | 4     | 4     | 13    | 13    | 16    |
| umhlatazana                |       |       |       |       | 1     |       | 0     |
| upsala                     |       |       | 1     |       |       |       | 0     |
| urbana                     | 29    | 49    | 59    | 53    | 29    | 14    | 12    |
| usumbora                   |       |       |       |       |       | 3     | 1     |
| uzaramo                    |       |       | 1     |       |       |       | 3     |
| vefle                      |       |       |       | 2     |       | 3     | 0     |
| victoria                   | 2     |       |       |       | 1     | 1     | 2     |
| virchow                    | 6     | 7     | 4     | 21    | 29    | 47    | 11    |
| wandsworth                 | 1     |       |       | 1     |       | 1     | 1     |
| wangata                    |       |       |       |       | 1     | 1     | 0     |
| wayne                      |       |       |       |       |       |       | 1     |
| wassenaar                  | 1     | 2     |       | 1     | 2     | 1     | 1     |
| welikada                   |       | 3     |       |       |       |       | 0     |
| weltevreden                | 78    | 54    | 104   | 151   | 112   | 118   | 144   |
| weslaco                    |       | 1     | 1     | 1     | 2     | 1     | 3     |
| westerstede                |       |       | 3     |       | 2     | 1     | 0     |
| westhampton                | 3     | 2     | 2     | 7     | 6     | 1     | 1     |
| wien                       |       |       |       |       |       |       | 5     |
| willemstad                 | 2     | 2     |       | 3     |       |       | 0     |
| worthington                | 22    | 35    | 59    | 46    | 46    | 55    | 36    |
| yoff                       |       |       |       |       |       |       | 1     |
| zanzibar                   | 1     |       |       |       |       |       | 0     |
| 58                         |       | 1     |       |       |       |       | 0     |
| 58 a                       |       | 1     |       |       |       |       | 0     |
| 54, 24 = 23                |       |       |       | 1     |       |       | 0     |
| 57 a, 26                   |       |       |       | 1     |       |       | 0     |
| Group A                    |       | 3     | 1     | 5     | 1     | 3     | 6     |
| Group B                    | 401   | 340   | 397   | 359   | 438   | 626   | 637   |
| Group C                    | 13    | 10    | 17    | 31    | 36    | 21    | 24    |
| Group C1                   | 58    | 99    | 111   | 86    | 95    | 102   | 79    |
| Group C2                   | 72    | 128   | 132   | 106   | 110   | 100   | 126   |
| Group D                    | 70    | 98    | 111   | 75    | 61    | 76    | 92    |
| Group E                    | 9     | 16    | 20    | 37    | 20    | 24    | 26    |
| Group E1                   |       | 1     |       | 1     | 3     | 1     | 1     |
| Group E2                   |       |       |       |       |       |       | 0     |
| Group E3                   |       |       |       |       |       |       | 1     |
| Group E4                   | 4     |       |       | 3     | 2     |       | 0     |

TABLE IV. SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1968-1974 - Continued

| SEROTYPE       | 1968   | 1969   | 1970   | 1971   | 1972   | 1973   | 1974   |
|----------------|--------|--------|--------|--------|--------|--------|--------|
| <i>Group F</i> | 2      |        | 4      | 7      | 2      | 2      | 0      |
| <i>Group G</i> | 8      | 17     | 20     | 22     | 11     | 10     | 8      |
| <i>Group H</i> | 3      | 4      | 2      |        | 1      | 4      | 4      |
| <i>Group I</i> |        | 1      | 2      | 3      | 1      | 2      | 5      |
| <i>Group L</i> |        |        |        | 1      |        |        | 0      |
| <i>Group O</i> | 3      | 3      | 1      | 1      | 1      | 1      | 1      |
| <i>Group P</i> |        |        |        | 1      |        |        | 0      |
| <i>Group R</i> |        |        |        | 2      |        |        | 0      |
| <i>Group W</i> |        |        |        |        |        | 1      | 0      |
| <i>Group V</i> |        | 1      |        |        |        |        |        |
| Unknown        | 558    | 498    | 438    | 450    | 409    | 181    | 148    |
| TOTAL          | 19,740 | 21,413 | 24,216 | 25,694 | 26,110 | 26,693 | 23,838 |



# STATE EPIDEMIOLOGISTS AND STATE LABORATORY DIRECTORS

The State Epidemiologists are the key to all disease surveillance activities. They are responsible for collecting, interpreting, and transmitting data and epidemiologic 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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Maryland  
Massachusetts  
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Missouri  
Montana  
Nebraska  
Nevada  
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New York State  
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