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ANNUAL PSITTACOSIS
SUMMARY, 1967

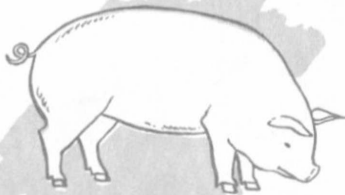
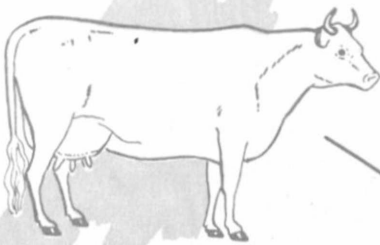
NATIONAL

COMMUNICABLE DISEASE CENTER

JUNE 1968

ZOONOSES

SURVEILLANCE



PSITTACOSIS

- I. SUMMARY
- II. HUMAN CASES OF PSITTACOSIS
- III. AVIAN PSITTACOSIS-ORNITHOSIS
- IV. RESEARCH TOPICS

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

PREFACE

Summarized in this report is information received from health, agriculture, and wildlife officials from the various States and their counterparts in the Federal government. Much of the information is preliminary. It is intended primarily for the use of those responsible for disease control activities. Anyone desiring to quote this report should verify the data at the original source for accuracy and interpretation.

Contributions to the surveillance report are most welcome. Address:

National Communicable Disease Center
Atlanta, Georgia 30333

Attn: Zoonoses Surveillance Unit
Veterinary Public Health Section
Epidemiology Program

National Communicable Disease Center	David J. Sencer, M.D., Director
Epidemiology Program	Alexander D. Langmuir, M.D., Chief
Veterinary Public Health Section	James H. Steele, D.V.M., Chief
Statistics Section	Ida L. Sherman, M.S., Acting Chief
Foreign Quarantine Program	Arthur S. Osborne, M.D., Chief
Epidemiology and Research Analysis Section	James W. Mosley, M.D., Chief
	John H. Richardson, D.V.M
Laboratory Program	U. Pentti Kokko, M.D., Chief
Virology Section	Robert E. Kissling, D.V.M., Chief
	John A. Stewart, M.D.
Report Prepared by	Dario T. Cappucci, Jr., D.V.M.
	Zoonoses Surveillance Unit

I. SUMMARY

In 1967 a total of 41 human cases of psittacosis were reported to the National Communicable Disease Center (NCDC). This was 9 cases fewer than in 1966¹. Psittacosis surveillance reports were received on 38 of the 41 cases. Parakeets and pigeons were the most frequently mentioned probable sources of infection. The greatest risk of exposure was among pet bird owners.

As in 1966, no chicken, turkey, or other avian ornithosis outbreaks were reported in 1967.

II. HUMAN CASES OF PSITTACOSIS

A total of 41 cases of human psittacosis were reported from 19 states in 1967, the lowest number since 1951, when 25 were reported (Table 1 and Figure 1). The following states reported three or more cases: Texas (9), Massachusetts (5), New York (3), Pennsylvania (3), and Tennessee (3). Fourteen states reported only one or two cases. A downward trend in reported cases began in the late 1950's.

Parakeets and pigeons comprised the largest numbers of probable infective sources with 9 cases each (Table 2). Chickens and turkeys were incriminated as probable infective sources in four cases--two each. Nineteen other cases were associated with miscellaneous or unknown sources of infection. One patient, a 17-year-old youth who lived in a city, had no known avian exposure.

Pet bird owners made up the exposure category with the greatest risk, 12 cases (Table 3). Three poultry farmers, two pet bird dealers, and 1 poultry processor accounted for other known exposure categories (Table 4). Twenty-three remaining cases were of miscellaneous or unknown exposure.

Of the 38 human cases for which there was epidemiologic data, 27 were males and 11 females.

III. AVIAN PSITTACOSIS - ORNITHOSIS

A. EPIDEMIOLOGIC STUDIES

No chicken, turkey or other avian ornithosis outbreaks were reported to the NCDC in 1967.

B. IMPORTATION OF PSITTACINE BIRDS

On October 10, 1967, revised quarantine procedures on the importation of psittacine birds into the United States were published in the Federal Register². The major provisions of the regulations are summarized below.

Entry Restrictions - Psittacine birds are admissible into the United States if inspection at the port of entry reveals no evidence of disease(s), communicable to man and if the birds meet the following applicable requirements:

Birds, originating from treatment centers approved by the Surgeon General and outside of the United States, are admissible without restrictions as to the numbers imported or intended disposition following arrival. All shipments must be accompanied by an entry document which is completed at the point of origin.

Members of a single household may import as many as two (2) psittacine birds as pets in any 12-month period, provided the birds are not intended for sale or trade, and the owner agrees to have the birds medicated in the United States under the conditions described in the owner's statement (which is completed at the port of entry).

Birds imported for medical research and accompanied by a permit issued by the Surgeon General are admissible under the specified conditions of the permit.

Birds consigned to approved zoological park treatment centers in the United States and accompanied by a permit issued by the Surgeon General are admissible under the specified conditions of the permit.

Pet birds (no limit as to the number) which are taken abroad by owners may be returned to the United States subject to the conditions of a permit issued by the Surgeon General.

Inquiries for instructions, application forms, and other information relating to the regulations on importation of psittacine birds should be addressed to the Chief, Foreign Quarantine Program, National Communicable Disease Center, Atlanta, Georgia, 30333, or to Public Health Service quarantine stations at United States ports of entry.

IV. RESEARCH TOPICS

A. INTERNATIONAL VIEWPOINTS

The Joint FAO/WHO Expert Committee on Zoonoses has recently prepared its third report³. The Committee has indicated that the majority of bedsonial infections in man are associated with avian exposures; in addition, some 130 avian and 16 mammalian species are affected by bedsonial infections, including psittacosis - ornithosis. The Committee stressed the urgent need for the identification of animal sources of human bedsonial infections.

B. NOMENCLATURE

A number of genera have been used in reference to the members of the psittacosis, lymphogranuloma venereum, and trachoma group (PLT): Chlamydia, Miyagawanella, Bedsonia, and Rakeia. Recently, Page has proposed that the PLT group of organisms be unified in the genus Chlamydia⁴. The Judicial Commission of the International Committee on Bacteriological Nomenclature has yet to make a final decision on Page's proposal.

C. EPIZOOTIC BOVINE ABORTION

A drug trial to curtail the high incidence of epizootic bovine abortion in an Israeli dairy herd was recently completed⁵. Parenteral injections of tetracycline, either at the beginning of the fourth month of gestation, or at the start of both the fourth and seventh months reduced the number of abortions. Thirteen (twelve percent) of 106 experimentally-treated cows aborted, as compared to 15 (fifty percent) of 31 control nontreated cows.

D. MYOCARDITIS IN PSITTACOSIS

Psittacosis with involvement of the heart is an extremely rare condition in man. However, in the 1967 British medical literature, two cases were documented^{6,7}. Both patients had known exposure to avian species.

The first patient, an 18-year-old male, was hospitalized on July 15, 1965, with complaints of headache, dysphagia, and a burning sensation in the retrosternal area. An additional symptom was calf tenderness in both legs. Oral temperature was 38.8°C and blood pressure 110/80 mm. Hg. Numerous white shallow ulcers were observed on the fauces and soft palate. A chest roentgenogram revealed normal heart and lung patterns. The lungs were normal on percussion and auscultation. No cardiac murmurs or pericardial friction rubs were auscultated. On electrocardiographic examination, inverted T-waves and prolongation of the Q-T interval were present--findings compatible with a diagnosis of myocarditis. Serological tests revealed the presence of antibodies against the bedsonial group of organisms: titers of 1:320 (July 7), 1:480 (July 25), 1:240 (August 23), and 1:160 (September 9). In approximately two weeks time the patient was discharged; in another three weeks he was completely symptom-free, although follow-up studies revealed persistence of the abnormal electrocardiogram.

A second patient, a 13-year-old boy who had contact with parakeets, was hospitalized on September 30, 1967, with complaints of dyspnea, cough, and expectoration of three weeks duration. Additional symptoms were nausea, retching, upper abdominal discomfort, and diarrhea. A physical examination revealed the following: crepitations throughout the lung fields, a heart rate of 140 per minute, a thready pulse, and a blood pressure of 95/60 mm. Hg. Roentgenograms showed moderate generalized cardiac enlargement and the presence of some pericardial effusion. An electrocardiogram of low voltage pattern was obtained. Serological studies showed the following antibody levels against an active psittacosis infection: titers of 1:1024 (October 3), 1:256 (October 12), and 1:64 (October 23). Despite four weeks of extensive chemotherapy and care, the patient developed pleural effusion and suddenly died. A postmortem examination revealed a pulmonary embolus and confirmed the diagnosis of myocarditis.

References

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6. Coll, R. and Horner, I., Cardiac Involvement in Psittacosis, Brit. Med. J. 4: (5570) 35-36, Oct. 7, 1967.
7. MacLennan, W. J., Dymock, I. W., and Ross, C.A.C., Cardiac Involvement in Psittacosis, Brit. Med. J. 4: (5579) 620-621, Dec. 9, 1967.

TABLE 1
HUMAN PSITTACOSIS CASES, 1957-1967

STATE	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967*
Alabama	1	1	2	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	1	-	-	-	-	-
Arizona	1	-	-	1	-	1	1	-	1	-	-
Arkansas	1	-	-	1	-	-	-	1	-	-	-
California	27	17	17	12	10	10	14	14	12	6	2
Colorado	4	-	2	1	-	2	-	-	-	-	-
Connecticut	10	1	7	4	2	6	3	-	2	1	2
Delaware	-	-	-	-	1	-	-	-	-	-	-
Dist. of Col.	-	1	-	-	-	-	-	-	-	-	-
Florida	-	1	-	-	-	-	-	1	1	-	1
Georgia	11	2	3	-	2	-	3	4	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-
Idaho	4	2	5	-	1	-	-	-	-	-	-
Illinois	18	7	11	7	7	4	11	6	5	1	-
Indiana	3	-	-	-	-	1	-	-	-	-	-
Iowa	5	6	1	-	-	-	-	1	-	-	1
Kansas	-	1	1	1	-	-	-	-	-	1	1
Kentucky	-	-	-	2	-	-	1	-	1	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	1
Maine	-	2	5	-	-	-	-	-	1	-	-
Maryland	5	1	-	-	-	1	-	-	2	-	-
Massachusetts	5	3	2	2	3	1	2	2	1	4	5
Michigan	3	5	2	3	2	3	4	3	1	-	1
Minnesota	36	22	22	4	2	4	1	1	5	3	2
Mississippi	-	-	1	-	-	-	-	-	-	-	-
Missouri	1	2	-	-	-	4	-	-	-	-	-
Montana	2	-	-	-	-	2	1	-	-	-	2
Nebraska	-	2	-	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	1	-	-	-	-	-	-	-	1	1
New Jersey	-	2	-	-	1	1	-	3	-	1	-
New Mexico	-	1	1	-	-	-	-	-	-	-	-
New York	24	18	13	9	6	6	5	2	4	1	3
North Carolina	4	2	-	-	1	3	1	1	1	1	-
North Dakota	-	-	-	-	-	-	-	-	-	-	-
Ohio	10	3	1	1	-	1	2	3	2	1	1
Oklahoma	2	-	-	-	-	-	-	-	-	-	1
Oregon	15	9	1	3	2	1	2	1	1	1	-
Pennsylvania	30	9	25	27	6	5	-	2	1	4	3
Rhode Island	-	-	-	-	-	-	-	-	-	-	-
South Carolina	1	1	-	-	-	-	-	-	-	-	-
South Dakota	-	-	-	-	1	-	-	-	-	-	-
Tennessee	7	4	3	8	6	1	1	2	4	3	3
Texas	6	2	4	-	23	-	17	1	8	12	9
Utah	7	1	-	1	3	1	2	-	2	-	-
Vermont	-	1	-	-	-	-	-	-	-	-	-
Virginia	10	4	-	-	1	-	-	1	1	2	-
Washington	5	1	1	2	2	-	-	-	2	1	1
West Virginia	-	-	-	-	1	-	1	-	-	-	-
Wisconsin	20	22	17	24	18	20	4	4	3	6	1
Wyoming	-	1	-	-	1	-	-	-	-	-	-
TOTALS	278	158	147	113	102	79	76	53	61	50	41

Source: National Morbidity Reports and Case Reports
Submitted to the NCDC Zoonoses Surveillance Unit

*Preliminary Data

TABLE 2
PROBABLE SOURCE OF INFECTION IN 636 HUMAN PSITTACOSIS CASES
UNITED STATES, 1957-1967

YEAR	PARAKEETS	TURKEYS	CHICKENS	DUCKS	PIGEONS	OTHER	TOTAL
1957	117	1	2	-	8	4	132
1958	52	24	4	-	-	4	84
1959	58	5	7	-	6	5	81
1960	26	1	2	-	3	2	34
1961	33	27	3	-	1	5	69
1962	27	2	2	-	3	4	38
1963	15	-	-	1	9	3	28
1964	17	1	-	-	10	8	36
1965	23	4	4	-	5	12	48
1966	24	-	2	-	9	10	45
1967*	9	2	2	-	9	19+	41
TOTALS	401	67	28	1	63	76	636

+ Includes: 11 not specified or unknown, 2 parrots, 1 canary, 1 crow, 1 dove, 1 sparrow, 1 starling, and 1 no known avian exposure.

* Preliminary Data Source: Case Reports Submitted to the NCDC,
Zoonoses Surveillance Unit

TABLE 3
EXPOSURE CATEGORIES IN 653 HUMAN PSITTACOSIS CASES
UNITED STATES, 1957-1967

YEAR	PET BIRD	PET BIRD	PET BIRD	POULTRY	OTHER	TOTAL
	BREEDER	DEALER	OWNER	PROCESSOR		
1957	8	12	73	-	47	140
1958	1	3	25	21	35	85
1959	3	5	17	4	38	67
1960	-	1	25	1	13	40
1961	1	2	21	27	23	74
1962	2	-	9	3	32	46
1963	-	3	22	-	6	31
1964	5	4	13	-	14	36
1965	3	2	15	7	21	48
1966	2	3	21	1	18	45
1967*	-	2	12	1	26+	41
TOTALS	25	37	253	65	273	653

+ Includes: Categories not specified or unknown

* Preliminary Date Source: Case Reports Submitted to the NCDC,
Zoonoses Surveillance Unit

TABLE 4

HUMAN PSITTACOSIS CASES - UNITED STATES, 1967*
 AVAILABLE DATA ON PROBABLE SOURCES OF INFECTION AND EXPOSURE CATEGORIES

EXPOSURE CATEGORIES	PROBABLE SOURCES OF INFECTION TO MAN							NO KNOWN AVIAN EXPOSURE	TOTALS
	PARAKEETS	OTHER PET BIRDS	CHICKENS	TURKEYS	PIGEONS	WILD BIRDS	NOT SPECIFIED		
Pet Bird Breeders									—
Pet Bird Dealers		2							2
Pet Bird Owners	9	3							12
Poultry Processors				1					1
Poultry Farmers			1	1	1				3
Other ⁺			1		8	4	9	1	23
Totals	9	5⁺⁺	2	2	9	4⁺⁺⁺	9	1	41

*Preliminary Data

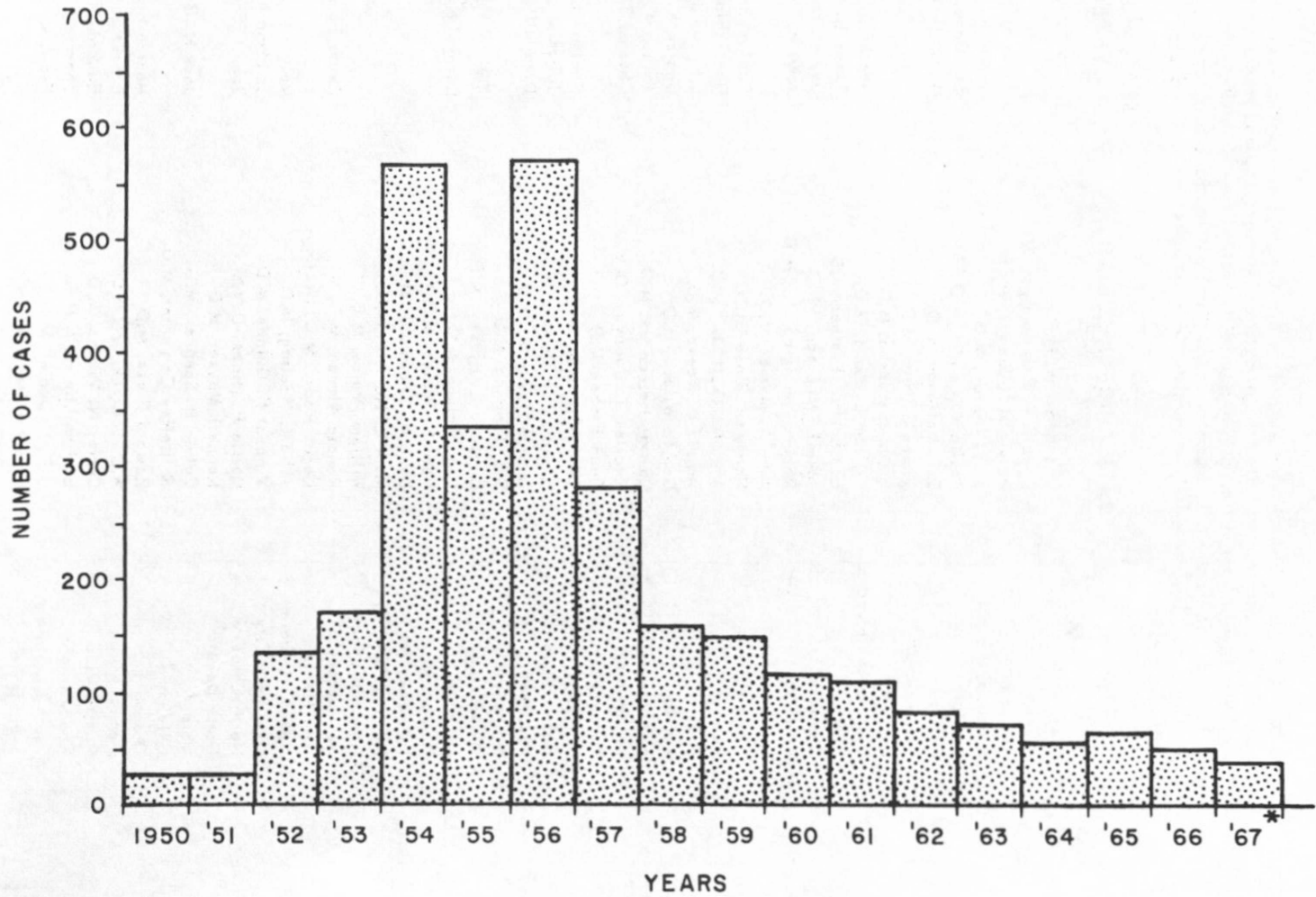
+Includes categories not specified or unknown

++Includes 2 parrots, 2 psittacines of unknown species, and 1 canary

+++Includes 1 crow, 1 dove, 1 sparrow, and 1 starling

Source: Case Reports Submitted to the NCDC, Zoonoses Surveillance Unit

Figure 1
REPORTED HUMAN PSITTACOSIS CASES
1950—1967



STATE EPIDEMIOLOGISTS STATE PUBLIC HEALTH VETERINARIANS

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

STATE	STATE EPIDEMIOLOGIST	STATE PUBLIC HEALTH VETERINARIAN
Alabama	W.H.Y. Smith, M.D.	
Alaska	Donald K. Freedman, M.D.	
Arizona	Melvin H. Goodwin, Ph.D.	Philip M. Hotchkiss, D.V.M.
Arkansas	J. T. Herron, M.D.	Harvie R. Ellis, D.V.M.
California	Philip K. Condit, M.D.	Ben Dean, D.V.M.
Colorado	C.S. Mollohan, M.D.	Martin D. Baum, D.V.M.
Connecticut	James C. Hart, M.D.	
Delaware	Floyd I. Hudson, M.D.	
District of Columbia	William E. Long, M.D.	George D. Coffee, D.V.M.
Florida	E. Charlton Prather, M.D.	James B. Nichols, D.V.M.
Georgia	John E. McCroan, Ph.D.	David Dreesen, D.V.M.
Hawaii	Robert Penington, Jr., M.D.	John M. Gooch, D.V.M.
Idaho	John A. Mather, M.D.	
Illinois	Norman J. Rose, M.D.	Paul R. Schnurrenberger, D.V.M.
Indiana	A.L. Marshall, Jr., M.D.	Dan Schlosser, D.V.M.
Iowa	Arnold M. Reeve, M.D.	S.L. Hendricks, D.V.M.
Kansas	Don E. Wilcox, M.D.	George A. Mullen, D.V.M.
Kentucky	Calixto Hernandez, M.D.	Joseph W. Skaggs, D.V.M.
Louisiana	*Charles T. Caraway, D.V.M.	*Charles T. Caraway, D.V.M.
Maine	Dean Fisher, M.D.	
Maryland	John H. Janney, M.D.	Kenneth L. Crawford, D.V.M.
Massachusetts	Nicholas J. Fiumara, M.D.	Julian M. Karasoff, D.V.M.
Michigan	George H. Agate, M.D.	Donald B. Coohan, D.V.M.
Minnesota	D.S. Fleming, M.D.	
Mississippi	Durwood L. Blakey, M.D.	
Missouri	E.A. Belden, M.D.	Edmund R. Price, D.V.M.
Montana	Mary E. Soules, M.D.	
Nebraska	Lynn W. Thompson, M.D.	
Nevada	Mark L. Herman, M.D.	
New Hampshire	William Prince, M.D.	
New Jersey	Ronald Altman, M.D.	Oscar Sussman, D.V.M.
New Mexico	Logan Roots, M.D. (Acting)	
New York State	Julia L. Freitag, M.D.	Melvin K. Abelseth, D.V.M.
New York City	Vincent F. Guinee, M.D.	Jeroham Asedo, D.V.M.
North Carolina	Martin P. Hines, D.V.M.	John I. Freeman, D.V.M.
North Dakota	Kenneth Mosser, M.D.	
Ohio	Calvin B. Spencer, M.D.	Jack H. Russell, D.V.M.
Oklahoma	R. LeRoy Carpenter, M.D.	
Oregon	Edward Press, M.D.	Monroe Holmes, D.V.M.
Pennsylvania	W.D. Schrack, Jr., M.D.	Ernest J. Witte, V.M.D.
Puerto Rico	Carlos N. Vicens, M.D.	Eduardo Toro, D.V.M.
Rhode Island	E. Franklin Hall, M.D.	Thomas Grennan, Jr., D.V.M.
South Carolina	G.E. McDaniel, M.D.	Frank M. Lee, D.V.M.
South Dakota	G.J. Van Heuvelen, M.D.	
Tennessee	C.B. Tucker, M.D.	Luther E. Fredrickson, D.V.M.
Texas	M.S. Dickerson, M.D.	A.B. Rich, D.V.M.
Utah	Robert Sherwood, M.D.	
Vermont	Linus J. Leavens, M.D.	D. Pomar, D.V.M.
Virginia	Paul C. White, M.D.	
Washington	B. John Francis, M.D.	
West Virginia	N.H. Dyer, M.D.	
Wisconsin	H. Grant Skinner, M.D.	Wayne H. Thompson, D.V.M.
Wyoming	Herman S. Parish, M.D.	

*Dual assignment