Wyoming State Veterinary Laboratory

Biennial Report

1998 and 1999

Department of Veterinary Sciences
College of Agriculture
University of Wyoming
1174 Snowy Range Road
Laramie, WY 82070
(307) 742-6638
(800) 442-8331
FAX: (307) 721-2051
WEB: http://www.uwyo.edu/VETSCI/vetlab.htm

Directory of Current Personnel
Wyoming State Veterinary Laboratory

WSVL Mission

The mission of the Wyoming State Veterinary Laboratory and Department of Veterinary Sciences is to provide accessible, timely, and accurate diagnostic services, animal disease research, and education to veterinarians, animal owners, students, others interested in animal health, and the people of Wyoming.

Administration

Francis D. Galey DVM, PhD, (ABVT) Director
Beth Howell Office Manager
Todd Bleifuss Laboratory Information Specialist

Bacteriology/Rabies

Kenneth Mills PhD
Amy Boerger-Fields, BS

Parasitology/Genetics/Clinical Pathology

William Jolley PhD
Angie McGuire, MS

Virology/Serology/ Electron Microscopy

Hana Van Campen DVM, PhD (ACVM)
Jackie Cavender, MS
Joan Edwards, BS
Carol Hearne, MS

Pathology

Todd Cornish DVM, PhD, (ACVP)
Donal O'Toole, MVB, PhD (MRC Path)
Elizabeth Williams DVM, PhD (ACVP)
Paula Jaeger HT (ASCP
Kim Benson BS
Rodney Rogers BS

Toxicology

Merl Raisbeck DVM, PhD, (ABVT)
Deborah Sanchez BS
Roger Siemion BS

State-Federal Veterinary Service

Ella Nelson
Becky Wills BS

Veterinary Outreach

Lynn Woodard DVM, PhD, (ACVM)
Cody Molle BS

Clerical

Barbara Garrett
Louise Smithson

Advisory Committee

Jim Briddle DVM
Mike Driscoll DVM
JD Fox DVM
John Morris
Ed Weppner
Bill Lambert

Jim Logan DVM (State Veterinarian, ex-officio)

Director's Message

The activities of the Wyoming State Veterinary Laboratory for 1998 and 1999 are summarized herein. The laboratory continues to strive to provide the highest quality diagnostic services possible. These efforts are made evident by the ongoing growth in accessions (cases) which have amounted to 8.2% annually since 1980 and at almost 4% per year since 1995.

We have recently undergone a few faculty changes. Dr. Milt McAllister left for a new position. Dr. Todd Cornish replaced him in the fall of 1999. Dr. Cornish has a DVM from the University of California, Davis and a PhD in pathology from the University of Georgia. Todd is certified by the American College of Veterinary Pathology. His research interest includes viral reservoirs in animals with a great deal of experience about the vesicular stomatitis virus. Also in the fall of 1999, Dr. Lynn Woodard stepped down as Director of the WSVL to develop a veterinary outreach program for the laboratory. I joined the laboratory as the new director at that time.

My most pressing goal is to improve the funding basis for the laboratory. This program suffers from obsolete equipment and facilities as well as unsteady support for operations and staff. Our funding for operations has not changed since the low point in 1993 of approximately $97,620, and that includes $26,300 that is earmarked for rabies testing. Your fees ($335,445 for 1999) support the balance of our operations. Thus, fees support over 70% of operations. Unfortunately, 25% of that income is derived from one test that has been declining at 10-16% per year. We rely heavily on Federal research funds (Hatch and Formula animal health) to support disease investigations.

To begin to address our needs, our fee schedule was updated in consultation with our advisory committee and the WVMA leadership. In addition, an inventory of equipment and needs assessment was prepared for our advisory committee and the University Administration. The Dean of the College of Agriculture, with the Vice Presidents of Research, Academic Affairs, and Administration and Finance arranged a finance package that will allow us to meet our most dire equipment needs for this year. We will keep working with this team to meet other pressing needs in the coming year. However, the large magnitude of our operational funding situation demands a review of our overall support structure. This issue is under discussion and will require your help if we are to be successful.

We are also working to improve client communications. We purchased the VisuaLab laboratory information system at the end of 1999. Ultimately we hope this system will allow ready access to case information and provide more timely and useful case and annual reports. This system should allow for automatic FAXing and emailing of results. Ultimately, we hope allow clients to access their cases and interact with diagnosticians about cases over the WEB via a password, although this development is still a few years away. We are also initiating a regular newsletter and welcome your input about content.

Our research continues to focus on diseases common to wildlife & livestock of Wyoming. Among diseases researched in the past two years include Chronic Wasting Disease, BVD, Border Disease, Rabies, Selenosis, Brucellosis, Botulism, and Neosporosis.

In the next year we hope to work closely with our Advisory Committee, University Administration, and many of you to address our funding structure. We are also preparing for a 5 year AAVLD accreditation review this summer

(2000). Our goal is to continue to provide superior, interdisciplinary services, teaching outreach, & research programs in diagnostic veterinary medicine. In doing that, we hope to maintain the flexibility needed to target research about current animal disease problems in the state. We appreciate hearing your ideas about our testing services, client communications, and funding concerns. I look forward to meeting more of you over the next few years and thank you for your continued support of the WSVL.

Sincerely,

Frank Galey, Director, WSVL

Cases & Trends from 1998 and 1999

The pattern of disease types diagnosed by the WSVL did not change dramatically over the past two years. However, some investigations of interest are illustrated below.

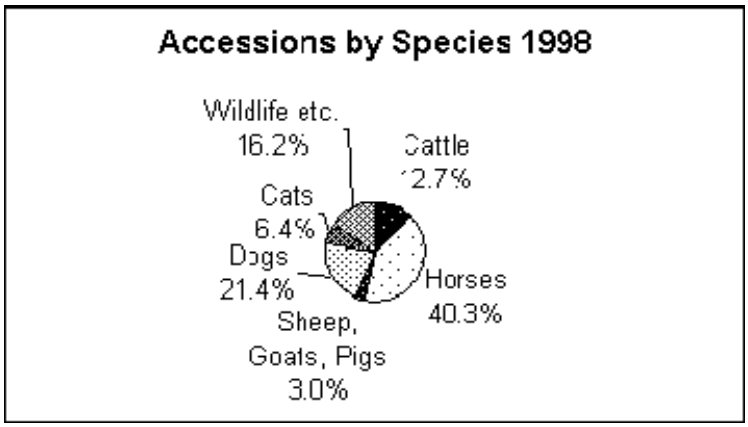
Neurological disease involving calves in Southeastern Wyoming was found to be of genetic origin after testing ruled out known infectious and toxic diseases. The source of the problem was traced to one sire using genetic testing.

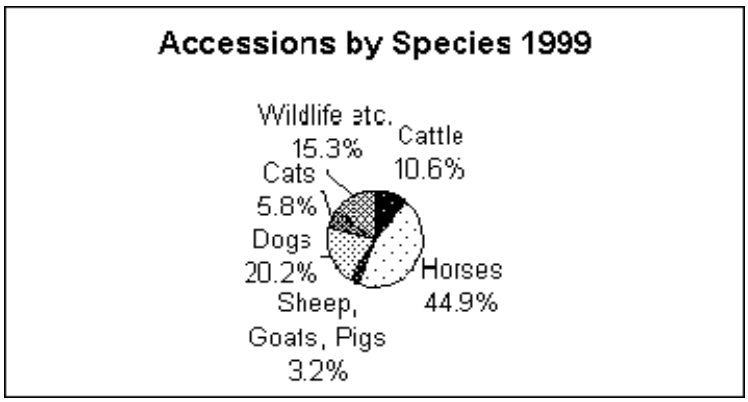
BVD continues to be a concern on many ranches. Persistently infected animals were identified and support was given to veterinarians and producers from throughout the state. In one instance, 4 PI animals were identified on a farm that had suffered as high as 100% incidence of pneumonia in calves in the fall of the 1999. Affected ranches came from throughout the state, ranging from Weston to Lincoln counties.

Trichomonas infection was found in bulls from ranches in an unprecedented 10 counties in 1999, which is up from 3 counties in 1997 and 4 counties in 1998. Trichomonas infection can cause devastating reproductive losses in cattle. This program has lent support to Dr. Logan and the Wyoming Livestock Board as they worked to devise rules to help control the disease in this state.

The rabies epizootic continues to be monitored in Wyoming. As this goes to press, skunk rabies has broken out in the Riverton-Lander area for the first time in recent memory. Members of the WSVL are currently investigating this epizootic.

Diagnosticians at the WSVL are following Malignant Catarrhal Fever in bison. Current efforts suggest that the disease is a severe problem in animals that are undergoing change or other stressful events. It is apparent that the feedlot bison is most susceptible to such changes. This diagnostic finding is currently being followed up by research in bison from nearby ranches and feedlots.



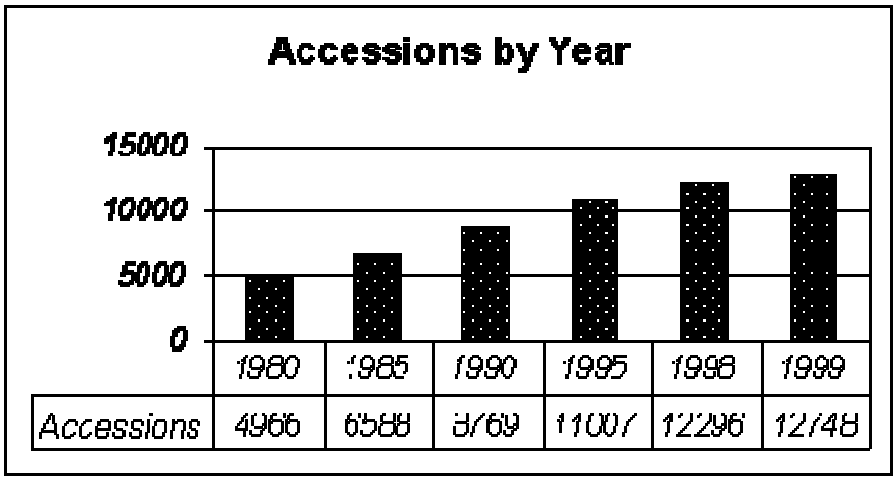


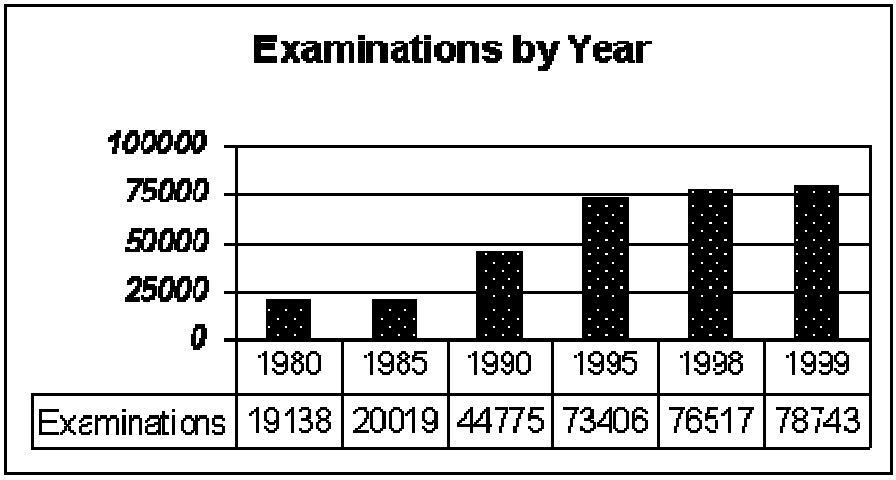
EXAMINATIONS PER ACCESSION

Species	Examinations/accession 98	Examinations/accession 99
Cattle	13.2	12.0
Horses	2.2	2.4
Sheep, Goats, Pigs	6.8	4.1
Dogs	1.9	2.1
Cats	2.3	2.2
Wildlife etc.	10.3	11.6
Total+special histol.	6.2	6.2

*Accessions and examinations include regulatory Equine Infectious Anemia testing for horses but do NOT include regulatory brucellosis testing of cattle or pseudorabies testing of pigs. Thus, Accessions by Species charts are skewed, overestimating the % of accessions attributable to horses.

** Examinations per Accession includes special histology stains done for all species in the total only.





*Examinations by year includes all tests performed with the exceptions of regulatory brucellosis and pseudorabies testing.

Rabies Epizootic

Year	Animals Tested	Domestic Animals	Skunks	Bats	Other	Total Positive	% Positive
1984	692	1	12	18	0	31	4.48%
1985	745	3	76	6	0	85	11.41%
1986	1370	14	221	17	2	254	18.54%
1987	793	3	59	8	0	70	8.83%
1988	608	4	20	13	0	37	6.09%
1989	915	1	53	22	0	76	8.31%
1990	1009	2	45	6	1	54	5.35%
1991	1290	2	96	12	0	110	8.53%
1992	1174	1	73	8	0	82	6.98%
1993	731	0	18	8	0	26	3.56%
1994	646	1	18	5	0	24	3.72%
1995	596	4	24	4	0	32	5.37%
1996	690	3	25	5	0	33	4.78%
1997	574	4	24	6	0	34	5.92%
1998	678	6	52	8	1	67	9.88%

1999	646	6	43	21	0	70	10.84%

*Domestic animals include17 cattle, 15 horses, 11 cats, 11 dogs, 1 mule.
Other includes 1 bobcat for 1998.
**Most skunk and domestic animal cases have occurred in drainages from North-Eastern and North-Central Wyoming. As this goes to press in 2000, a rabies epizootic has occurred in Fremont county involving skunks.

USDA-APHIS Veterinary Services
State-Federal Cooperative Laboratory

	Tests: 1998	Tests: 1999
Anaplasmosis	1073	753
Bluetongue	912	721
Bovine Leukosis	181	105
Brucellosis	54304	30634
Equine Infectious Anemia	8804	10554
Porcine Pseudorabies	2873	3448
Total	68147	46215

Examinations

Section/Year	**1998**	**1999**
Pathology		
Necropsies	508	1050
Histopathology cases	3413	3267
Histopathology wax blocks	21097	18448
Conventional special stains/unstained	1379	2070
Immunohistochemistry slides	870	4543
Cytology	171	150
Bacteriology/Rabies		
Cultures (primary only)	3372	3553
Antibiotic Sensitivities	586	627
Rabies Tests	678	646
Parasitology/Genetics/Clinical Pathology		
Parasitology	3763	1059
Cervid Testing	5225	4721
Hematology	1858	349
Serum Chemistry Panels	1872	2904
Urinalysis	55	18
Toxicology	1454	1220
Virology/Serology/ Electron Microscopy		

Viral Fluorescent Ab.	2772	2882
Virus Isolation Cultures	1508	1281
BVD ELISA	6219	3753
Serology	8516	7379
Electron Microscopy	374	303
State-Federal Cooperative		
Serology	13843	15581
Brucellosis	54304	30634
Other Testing	1141	1950
Referrals	1125	1521
Total:	138101	111908

*Note, high Brucellosis test numbers in 1998 reflect special, 6 county study.