

Vitae

Ronnie L. Byford, Ph.D.

Appointment:

25% Extension, 75% Research

Education:

B.S. Entomology (Plant Protection) 1978. Oklahoma State University
M.S. Entomology (Medical-Veterinary) 1980. Oklahoma State University
Ph.D. Entomology (Medical-Veterinary) 1984. Oklahoma State University

Employment:

Cooperative Extension Service 1997 – present
Extension Plant Sciences Department
New Mexico State University
Department Head

Department of Entomology, Plant Pathology, and Weed Science 1988 – present
New Mexico State University
Professor, 1994 – present
Associate Professor, 1988 – 1994

Department of Entomology 1983 – 1988
Louisiana State University
Associate Professor, 1987 – 1988
Associate Professor, 1983 – 1987

Teaching Experience:

Parasitology, EPWS/ANSC 462: undergraduate course on internal and external parasites of humans and domestic animals (1988 – present).

Insect Physiology, EPWS 491: undergraduate and graduate course in the basic structure and function of insect systems (1989 – present).

Major Areas of Research:

- Characterization of Insecticide Resistance in the Horn Fly, *Haematobia irritans* (L.): Documentation of cross-resistance; evaluation of biochemical, physiological, and behavioral mechanisms; defining ecological parameters influencing the evolution of resistance.

- Biology, Ecology, Distribution, and Population Dynamics of Arthropods Influencing Livestock Production Management Strategies.
- Design and Implementation of Model, Integrated Pest Management Programs for Livestock (Interdisciplinary approach involving nutritionist, parasitologist, veterinarian, and economist).
- Vector-borne Diseases: Vector blood-feeding behavior as it relates to transmission of pathogenic agents to animals.

Specific Projects:

- Biochemical and Genetic Factors Affecting Insecticide Resistance in *Haematobia irritans* (L.). *
- Interaction of Insecticide Resistance and Life History Traits in the Horn Fly, *Haematobia irritans* (L.).
- The House Fly (*Musca domestica* L.): Management Practices and Insecticide Resistance on New Mexico Dairies
- Black Flies (Diptera: Simuliidae) of Southern New Mexico: Species Composition, Distribution, and Observations on Species Affecting Horses in the Mesilla Valley.
- Physiological Responses of Beef Cattle to Horn Fly, *Haematobia irritans* (L.), and Gulf Coast Tick, *Amblyomma maculatum* Koch, Infestations. **
- Genomic DNA Extraction and RAPD Analysis as a Tool to Determine Genetic Differences Between Psoroptic Scabies Mites (Psoroptidae: Acari) from Various Hosts.
- Comparison of Genetic Variation in *Diamanus montanus* (Siphonaptera: Dolichopsyllidae) with the Occurrence of *Yersinia pestis* in Humans.
- West Nile Virus: Patterns, Establishment, and Maintenance of an Exotic Pathogen in an Arid Environment. *

* Interdisciplinary with EPPWS

** Interdisciplinary with ANSCI

Professional Society Membership:

Entomological Society of America
Southwestern Branch, Entomological Society of America
American Association of Veterinary Parasitologists
Livestock Insect Workers Conference (Chairman 1988, 1993, 2002)
New Mexico Academy of Science
National Cattleman's Association
New Mexico Cattleman's Association

Awards:

New Mexico State University, College of Agriculture & Home Economics
—Deans Award for Superior Achievement (1995)
Phi Kappa Phi
Gamma Sigma Delta
Sigma Xi