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Graduate Student Research on Tarnished Plant Bug at Mississippi State University

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Nineteen major professors supervising 30 graduate students (8% of all entomology graduates) during the last 50 years focused their research at Mississippi State University on tarnished plant bug, *Lygus lineolaris* (Palisot de Beauvois) (Table 1). Half of these students earned their MS degrees while the other half earned their PhDs. These studies covered a variety of topics including physiology, toxicology, and management strategies. Little of this research has been published other than theses and dissertations, but all are available from the Mississippi State University Library (http://library.msstate.edu/) and more recent publications are available in digital format. Basic science research topics have included rearing methods, physiology and landscape ecology, while more numerous applied research topics have focused on cotton management strategies such as host plant resistance, cultural controls, chemical controls and economic thresholds. Table 2 lists students and their major professors who worked with tarnished plant bug in their research.

Table 1. Number of graduate students completing studies on tarnished plant bug (TPB) in relation to total number of graduate students in entomology at Mississippi State University.

Years	Students working on TPB	Total Entomology Students	% students researching TPB
2003-2012	4	35	11.4%
1993-2002	4	44	9.1%
1983-1992	3	46	6.5%
1973-1982	14	103	13.6%
1963-1972	5	141	3.5%
Total	30	369	8.1%

Table 2. Entomology graduate students completing tarnished plant bug research at Mississippi State University, 1963-2012.

Year	Student	Major Advisor	Title	Degree
2012	Adams, Brian P.	Catchot, A. & J. Gore	The biology and management of tarnished plant bug *Lygus lineolaris* (Palisot de Beauvois), in cotton, *Gossypium hirsutum* (L.), in the Mississippi Delta	MS
2012	Self, Sarah R.	Schneider, J. C.	Chronobiology of *Lygus lineolaris* (Heteroptera: Miridae): implications for rearing and pest management	PhD
2010	Kumar, Ankit	Musser, F.	Optimization of an immunomarking technique for the study of tarnished plant bug movement between corn and cotton	MS
2003	Horn, Tyler O.	Harris, F. A.	Influence of resistance traits and boll age on tolerance of cotton to tarnished plant bug, *Lygus lineolaris* (Palisot de Beauvois) (Hemiptera: Miridae)	MS
2002	Catchot, Angus L.	Reed, J. T.	Occurrence of heliothine pests (Lepidoptera: Noctuidae) in ultra-narrow row and wide-row cotton cropping systems as affected by insecticide applications	PhD
2002	Howell, Michael S.	Reed, J. T.	Effects of spray adjuvants on insecticide application, efficacy, rainfastness, penetration of the plant canopy, and residual activity	MS
1998	Craig, Chism C.	Luttrell, R. G.	Development of a trap crop for *Lygus lineolaris* (Heteroptera: Miridae) and a refuge for production of *Heliothis virescens* (Lepidoptera: Noctuidae) susceptible to cotton expressing insecticidal proteins	MS
1996	Chinta, Srinivas	Baker, G.	Ultrastructure and physiology of sense organs in the tarnished plant bug, *Lygus lineolaris* (Palisot de Beauvois) (Heteroptera: Miridae)	PhD
1987	Tonhasca, Athayde	Luttrell, R. G.	Seasonal history of the clouded plant bug, *Neurocolpus nubilus* (Hemptera: Miridae), and development of damaging populations on cotton in northern Mississippi	MS
1985	Ma, Wai K. (Peter)	Ramaswamy, S.	Histological and histochemical changes during ovarian maturation in the tarnished plant bug, *Lygus lineolaris* (Palisot de Beauvois) (Hemiptera: Miridae)	MS
1984	Wilson, Bryan S.	Luttrell, R. G.	Quantitative measurements of the effects of feeding by *Lygus lineolaris* (Heteroptera: Miridae) on cotton fruit retention and yield	MS
1980	Anderson, Ronald E.	Davis, F. M.	Field evaluations of potential insect resistant cotton lines	PhD
1979	Ferreira, Joana M. S.	Frazier, J. L.	Ethology of host plant feeding preference by the tarnished plant bug, *Lygus lineolaris* (Palisot de Beauvois)	MS
1979	Hatfield, Larry D.	Frazier J. L.	Neuroethology of the gustatory discrimination by the tarnished plant bug, *Lygus lineolaris*, (P. de B.) (Hemiptera: Miridae)	PhD
1979	Kitten, William F.	Schuster, M. F.	Field evaluation of certain insect resistant and early maturing varieties of cotton under "Mid-South" production systems.	PhD

1979	Pendergrass, Jimmy E.	Shankland, D. L.	The impact of systematic insecticides on insect pests and their natural enemies in cotton	PhD
1978	Bleicher, Ervino	Pieters, E. P.	Comparison of sampling methods for the tarnished plant bug, *Lygus lineolaris* (Palisot de Beauvois), and selected arthropod predators in Mississippi cotton fields	MS
1977	Calderon, Mario	Schuster, M. F.	Effect of the nectariless character of cotton on the population dynamics of certain phytophagous and natural enemy insects	PhD
1977	Hormchan, Praparat	Schuster, M. F.	Biology of three exotic species, and role of native species of the genus *Peristenus*-parasites of tarnished plant bug, *Lygus lineolaris*, in Mississippi	PhD
1977	Lambert, Lavone	Jenkins, J. N	Characterization of thirty-five foreign cultivars of cotton for resistance to boll weevil, tobacco budworm, tarnished plant bug and bandedwing whitefly	PhD
1976	Naresh, Jagdish S.	Schuster, M. F.	Interactions of the tarnished plant bug, *Lygus lineolaris* (P. de B.) (Hemiptera: Miridae) and frego bract gene in different cotton variety backgrounds	PhD
1976	Thead, Larry G.	Harris, F. A.	A comparison of two sampling techniques for beneficial insects and destructive insects on cotton in Mississippi	MS
1974	Jech, Larry E.	Frazier, J. L.	Development of a meridic diet for the tarnished plant bug, *Lygus lineolaris*	MS
1974	Latson, Larry N.	Maxwell, F. G.	Evaluation and selection for resistance in cotton, *Gossypium hirsutum* (L.), to the tarnished plant bug, *Lygus lineolaris* (Palisot de Beauvois)	PhD
1973	Black, Emmett R.	Harris, F. A.	Economic threshold studies of the tarnished plant bug, *Lygus lineolaris* (Palisot de Beauvois), in cotton	PhD
1972	Hamer, Jimmy L.	Parrott, W. & Jenkins, J.	Host-plant resistance studies in cotton for resistance to the tarnished plant bug, *Lygus lineolaris* (Palisot de Beauvois)	PhD
1972	Latson, Larry N.	Maxwell, F. G.	Behavior studies of the tarnished plant bug, *Lygus lineolaris* (Palisot De Beauvois) on cotton, *Gossypium hirsutum* L. and horseweed, *Erigeron canadensis* L.	MS
1970	Timmons, Frank D.	Brook, T. S.	The effect of Temik in an integrated cotton insect control program	PhD
1967	Bouchard, Dennis F.	Brazzel, J. R.	Integrated control of cotton insect pests in the central delta area of Mississippi	MS
1966	Peden, Walter L.	Brazzel, J. R.	A new systemic insecticide, Temik (UC21149) for control of cotton insects	MS