

New State Record for *Chrysomya ruffifacies* (Diptera: Calliphoridae) in Mississippi¹

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Knowledge of blow fly species present in a given area and their hosts is important to entomologists, ecologists, and forensic scientists. There have been several studies documenting blow fly species present in Mississippi (Goddard and Lago 1983, J. Ga. Entomol. Soc. 18: 481–484; Goddard and Lago 1985, J. Entomol. Sci. 20: 312–317; Goddard et al. 2012, Midsouth Entomol. 5: 39–53), but none revealed the presence of *Chrysomya ruffifacies* (Macquart) (Diptera: Calliphoridae). Furthermore, an inquiry to the Mississippi Entomological Museum in 1998 by Dr. Lamar Meek at Louisiana State University revealed no specimens in the collection (Meek et al. 1998, Southwest. Entomol. 23: 373–373). Over the past two decades, this species has been reported in many states surrounding Mississippi: Alabama, Arkansas, Georgia, Louisiana, and Tennessee (Martin et al. 1996, Southwest. Entomol. 21: 477–478; Meek et al. 1998; Shahid et al. 2000, J. Forensic Sci. 45: 896–897; Tomerlin et al. 2005, J. Forensic Sci. 50: 152–153; Wells 2000, J. Entomol. Sci. 35: 91–92). This note provides records for adult and larval *C. ruffifacies* from Mississippi.

Adult and larval *C. ruffifacies* records were obtained in several ways. From 1 July 2012 through 31 December 2013, road-killed animals found on highways were surveyed for blow flies. When present, adult flies were collected by hand-netting. In some cases, fly larvae were removed from road-killed specimens and reared to the adult stage on fresh beef liver. Also, during September 2012, a small dead pig was placed in an enclosure on the Mississippi State University campus as part of a class project, and blow fly collections were made from it for approximately 4 weeks. Lastly, pinned blow flies housed in the Mississippi Entomological Museum (MEM) were examined for specimens of *C. ruffifacies*. In all of the above-mentioned cases,

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specimens were identified using standard blow fly keys (Hall and Townsend 1977, Va. Tech. Res. Bull. No. 123; Whitworth 2006, Proc. Entomol. Soc. Wash. 108: 689–725) and a few specimens were sent to Dr. Terry Whitworth (Pullwallop, Washington) for confirmation (MEM specimen nos. 90,706–90,709).

During the 1.5-yr survey, 115 larvae and 120 adult specimens of *C. ruffifacies* were collected from carrion in six counties in central and southern Mississippi: Clarke, George, Hinds, Oktibbeha, Rankin, and Sunflower. No specimens were collected in northern Mississippi. Despite surveys of carrion in all four seasons, all but one collection of *C. ruffifacies* occurred in the fall (26 September 2012–11 November 2013). In addition, 22 adult specimens were found in the MEM collection, again all collected in the fall.

Material examined: One male, Clark County, Mississippi: Near Quitman, 11-XI-2013, J. Goddard, ex. deer; 4 males, 6 females, George County, Mississippi: Lucedale, 30-VII-2013, J. Goddard, ex. coyote; 1 male, 5 females, Hinds County, Mississippi: Jackson, 17-IX-2013, J. Goddard; 85 third instar larvae, Oktibbeha County, Mississippi: Mississippi State University Campus, Starkville, 18-IX-2013–18-X-2013, F. Meyer, ex. pig (student class project); 1 male, 4 females, Oktibbeha County, Mississippi: Sessums, 1-XI-1999, D. Pollock; 4 males, 13 females, Oktibbeha County, Mississippi: Starkville, 17-X-2000, D. Pollock; 13 males, 90 females, Rankin County, Mississippi: Brandon, 11-XI-2013, W. Varnado, ex. bobcat; 30 third instar larvae, Sunflower County, Mississippi: Doddsville, 6-XI-2013, J. Seltzer.

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