

SHORTER CONTRIBUTIONS

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CALYPTOPROCTUS MARMORATUS, A STRIKING PLANTHOPPER, ARRIVES IN VIRGINIA FROM PARTS SOUTH (HOMOPTERA: FULGORIDAE)—While light-trapping for moths and other nocturnal insects in Patrick and Franklin counties, Virginia, during the 1999 and 2000 seasons, Anne C. Chazal (Department of Conservation and Recreation, Division of Natural Heritage) obtained several specimens of a large and colorful insect which upon its arrival at VMNH I initially considered to be a small species of cicada. Only when a specimen was shown to Dr. Lewis Deitz (North Carolina State University), was it identified as a native, although uncommon, fulgorid. According to information provided by Dr. Lois O'Brien (*in litt.*, 2001), this species is *Calyptoproctus marmoratus*, named by the Marquis Massimiliano Spinola in 1839 from material with no closer locality data than "Amerique septentrionale."

Spinola's species, succinctly described, fell into obscurity as its type material remained in his private collection for decades and only recently became available for study, following its transfer to the Naturhistorisches Museum, Vienna. Apparently *C. marmoratus* has not figured in the literature on American insects, even though it is represented in a number of collections under the name *Alphina glauca*, proposed by Zeno Payne Metcalf in 1923 for specimens from southwestern United States. General references such as Arnett's *American Insects* (1993: 213) do not mention *Calyptoproctus* in any context. It is anticipated that the taxonomy and nomenclature of this species will be formally clarified by Dr. O'Brien as a result of her examination of Spinola's type specimen. That such a large (nearly 20 mm long) and colorful Virginia homopteran was not registered for the North Carolina fauna (Brimley, 1938; Wray, 1967), inspired an interest in details of its distribution, particularly since Metcalf himself had collected fulgorids in that state for years without encountering this one. I thereupon surveyed various insect collections in southeastern United States in the hope of locating some unpublished records. The results have been interesting: a considerable number of specimens were found, and their provenance and dates of capture recorded on a large scale map (Fig. 1). Apparently *C. marmoratus* is actually widespread in the region between central Virginia and the Florida panhandle, but the earliest recorded collection date that I found is 1962, for Florence, South Carolina; others are dispersed from 1963 onward, the most recent being four sites in Virginia in 1999, 2000, and 2001.

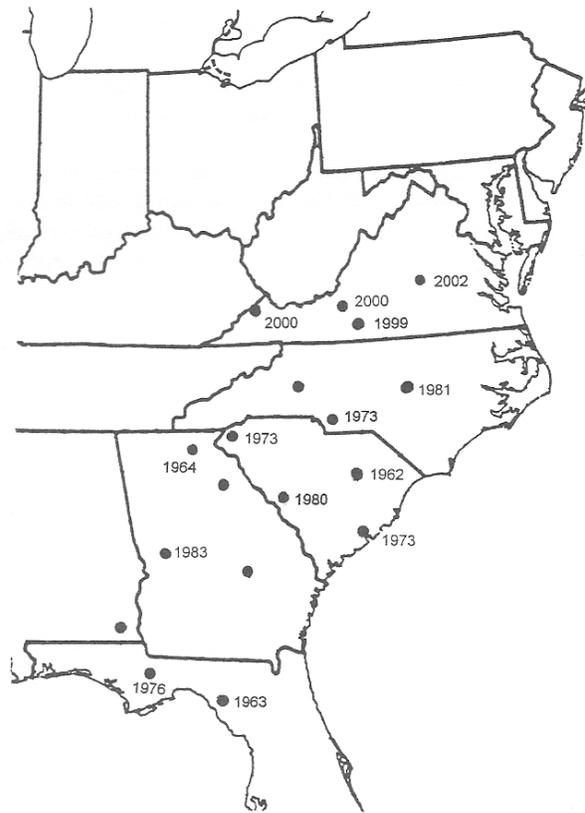


Fig. 1. Southeastern United States, with collection sites for *Calyptoproctus marmoratus*. Undated dots north of Florida are from years later than the earliest shown in each state, or from specimens without year of collection indicated. Occurrence of the species in Tennessee and Kentucky may be assumed with some confidence.

How can this situation be explained? It is certainly not attributable to lack of collecting. In Virginia, at least, trapping with blacklight has been conducted at scores of locations statewide for the past decade (by VMNH and DCR-DNH surveys) and less intensively for the two previous decades by survey personnel of the Cooperative Extension Service, VPI&SU, as well as myself. Comparable efforts also have been made in other southern states. That specimens have mostly appeared in collections since about 1980 suggests that recent migration into the region has taken place. One must suspect a rare native species experiencing a dramatic population increase in the mid-1960s followed by northward dispersal, perhaps in response to recent climatic warming in southeastern United States (cf. account of northward spread by the lygaeid bug *Neopamera albocincta* in Hoffman, 1996). It will be of

much interest to document the additional collections likely to be made in this state. If the apparent rate of movement is maintained it is not inconceivable that *Calyptoproctus* could arrive in Maryland or Pennsylvania by 2005 (if in fact it is not already there).

Virginia records (all VMNH) are as follows: *Appomattox Co.*: Holiday Lake State Park, 9 June 2002, Robert Vigneault (1). *Dickenson Co.*: Breaks Interstate Park, 1-14 July 2000, Robert Vigneault (2). *Patrick Co.*: near end of Rte. 624, head of Philpott Lake, 25 May 2000 (1); 13 August 1999 (1), both Anne C. Chazal. *Roanoke Co.*: Vinton, 26 May 2000, M. W. Donahue (1). Capture of *C. marmoratus* at the Breaks park, on the Kentucky state line, implies that the species is now present and awaiting discovery, in that state and Tennessee.

A fairly extended period of activity (late May-early August) is thus documented. All but one of the specimens cited were taken at UV light. So far, despite the extensive range occupied by the species, the host plant preferred by *C. marmoratus* remains to be discovered, another challenge to students of these insects.

Calyptoproctus marmoratus is easily recognized by the combination of its large size (15-20 mm) and color pattern: the forewings have an orange marginal spot at the base, followed immediately by a larger marginal black spot; distal parts of the wings are pale green, irregularly



Fig. 2. *Calyptoproctus marmoratus* Spinola, lateral aspect of specimen from Patrick Co., Virginia. Total length to tips of wings, 18 mm.



Fig. 3. The same specimen, dorsal aspect to show outline of head and elytral pattern.

marked by small black flecks; the veins are generally black, enclosing clear cells (Figs. 2, 3). As noted, the general body form somewhat resembles that of a small cicada.

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LITERATURE CITED

Arnett, R. H., Jr. 1993. American Insects: A Handbook of the Insects of America North of Mexico. Sandhill Crane Press, Gainesville, FL. 850 pp.

Brimley, C. S. 1938. The Insects of North Carolina, Being a List of the Insects of North Carolina and their Near Relatives. North Carolina Department of Agriculture, Raleigh. 560 pp.

Hoffman, R. L. 1996. Seed bugs of Virginia (Heteroptera: Lygaeidae). The Insects of Virginia 14: i-vi, 1-111.

Metcalfe, Z. P. 1923. A key to the Fulgoridae of eastern North America, with descriptions of new species. Journal of the Elisha Mitchell Scientific Society 38: 139-230.

Spinola, M. 1839. Essai sur les Fulgorelles, sous-tribu de la tribu des Cicadaïres, order des Rhyngotes. Annales de la Societe Entomologique de France 8: 133-337.

Wray, D. L. 1967. Insects of North Carolina. Third Supplement. North Carolina Department of Agriculture, Raleigh. 181 pp.

Richard L. Hoffman
Virginia Museum of Natural History
Martinsville, Virginia 24112