

A Preliminary List of the Robber Flies (Diptera: Asilidae) of Virginia

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“Robber-flies are among the most fascinating of all flies, except presumably to other small insects that are about to be snapped up by them.” Harold Oldroyd (1964)

ABSTRACT

One hundred fifteen species of Asilidae are listed for Virginia based on personal collecting, literature records, and museum specimens. Eleven additional species are considered possible for a total of 126. Four species (*Ceraturgus mitchelli* Brimley, *Cyrtopogon laphriformis* Curran, *Holopogon oriens* Martin, and *Lasiopogon appalachensis* Cannings) are recorded for the first time from the state.

Key words: Asilidae, Diptera, robber flies, Virginia, distribution, phenology.

INTRODUCTION

The Asilidae, commonly known as robber flies, are a fascinating family of predaceous Diptera. They are worldwide in occurrence and number over 7,000 species, with over 1,000 species in North America (Geller-Grimm, 2009). Robber flies are most common in open, arid habitats, and in North America are most abundant and speciose in the southwestern states and California. In deciduous-forested Virginia, Asilidae are often sparse in occurrence, but a number of species are widespread and common, and an important part of the state's fauna. Some species, such as *Ceraturgus aurulentus* (Fabricius), are apparently very rare throughout their range and beg for more attention in taxonomic surveys and state rare species lists.

Adult robber flies prey opportunistically on other flying insects by waiting on an exposed perch such as a leaf, rock, tip of a twig, or the ground surface (Fig. 1), and capture insects while in flight. An exception to this method is the small and delicate Leptogastrinae, which search amidst thick vegetation for perched insects such as mosquitoes, and may roost on the underside of a leaf (Fig. 1). As befits a visual predator, the eyes of Asilidae are large and separated for triangulation, and the antennae are reduced. Prey is injected with powerful toxins that both kill and liquefy the insides of the prey, which are then sucked out. Robber flies are entirely

harmless to people, neither biting nor serving as vectors of disease. An excellent and highly readable overview of the family Asilidae and its relationship in the order Diptera can be found in the classic book *The Natural History of Flies* by Oldroyd (1964).

The history of the description of Asilidae in Virginia can be traced back to John Banister, who illustrated a robber fly as “*Musca Lupus*” in the late 1600s. This drawing is reproduced as figure 63 in Ewan & Ewan (1970). *Musca lupus* can be aptly translated as “wolf fly.” Several species have historically been described from Virginia including *Laphria virginica* (Banks), *Machimus autumnalis* (Banks), *M. virginicus* (Banks), and *Megaphorus clausicellus* (Macquart); and more recently *Efferia kondratieffi* Bullington & Lavigne and *Lasiopogon marshalli* Cannings. However, no state list of Asilidae has been published for Virginia. The nearest regional summary concerns the fauna of Washington, D.C. (McAtee & Banks, 1920) and includes a key and annotated list of 83 species. Many of these records are from the Potomac Gorge area of Maryland and Virginia just west of Washington, and from Arlington and Fairfax counties in northern Virginia. A study of three sites in Maryland provides excellent ecological information for 37 species (Scarborough, 1974). A recent comprehensive list of 131 species of robber flies from Arkansas (Barnes et al., 2007) provides a good basis to which to compare the



Fig. 2. Representative robber flies of Virginia (not to scale). Left, top to bottom: *Laphria thoracica* Fabricius; *Promachus bastardii* (Macquart); *Nicocles pictus* (Loew). Right, top/bottom: *Diogmites neoternatus* (Bromley), with Hymenoptera prey; *Leptogaster brevicornis* Loew. (All photos by Paul Bedell except top right by Steve Roble).

Virginia fauna.

Two older state publications with good natural history information, and which overlap to a large extent with the Virginia fauna, are from Connecticut (Bromley, 1946) and Michigan (Baker & Fischer, 1975). More recently, several websites have greatly assisted the identification and occurrence of robber flies in the eastern United States (e.g., Beaton, 2009; Raney, 2010).

The abundance of many species of Asilidae in Virginia is unknown or conjectural. If a species was apparently common and widespread in my limited experience, I have noted such in the text. However, many species are represented by few records, either published and/or from museum specimens. Whether this represents true rarity, or just a lack of knowledge of their habitat and phenology, combined with little field effort, is unknown. Much remains to be learned about the Virginia fauna. In contrast to other insect groups such as butterflies (Lepidoptera) or dragonflies and damselflies (Odonata), robber flies do not appear on state or federal lists of threatened and endangered species. This is due to a substantial lack of knowledge. This paper is an initial attempt to delineate their distribution and occurrence in Virginia.

METHODS

I obtained records from three sources: published literature, museum specimens, and personal collecting. I collected specimens opportunistically from 2005-2010 with an aerial net, preserved them by freezing or placing in a collecting jar with ethyl acetate, and pinned each specimen. Survey locations were determined by work, family, or various natural history outings rather than any systematic attempt to cover geography and habitats. Additional specimens (ca. 500) were collected (some in Malaise traps) incidental to other insect surveys by staff of the Virginia Department of Conservation and Recreation, Division of Natural Heritage. Identifications were determined by keying specimens using published papers, painstakingly accumulated and often many decades old, for each genus.

As a starting point, a preliminary state list for Virginia was compiled based on the range information in Fisher & Wilcox (1997), the searchable species distribution on the website of Geller-Grimm (2009), and the paper by McAtee & Banks (1920).

Specimens were examined in collections of the Museum of Comparative Zoology at Harvard University (MCZ), National Museum of Natural History, Smithsonian Institution (NMNH), Virginia Museum of Natural History (VMNH), Virginia

Department of Conservation and Recreation, Division of Natural Heritage (NH), personal collection of the author, Paul Bedell (PB), and the Virginia Tech Department of Entomology insect collection (VT).

Date and locality information were obtained from specimen labels. If not provided on the labels, locality information was then determined to county. In this paper, counties are indicated in italics and independent cities in plain type. To avoid duplication in citing locality sources, I only cite literature sources when specimens were not in the collections I examined. In some instances, literature may refer to both museum specimens I examined and additional specimens from the same county not in the collections I visited. In these cases I have cited both sources.

Species are grouped in subfamilies based on the recent classification proposed by Dikow (2009). Subfamilies are in alphabetical order, as are genera within each subfamily, but without further subdivision into Tribes. Taxonomy and synonymies follow Fisher & Wilcox (1997).

RESULTS AND DISCUSSION

One hundred fifteen species of Asilidae are listed for Virginia based on personal collecting, literature records, and museum specimens. Eleven additional species are considered possible for a total of 126. Four species (*Ceraturgus mitchelli* Brimley, *Cyrtopogon laphriformis* Curran, *Holopogon oriens* Martin, and *Lasiopogon appalachensis* Cannings) are recorded for the first time from the state. Approximately 500 specimens of 82 species of Asilidae from Virginia were collected by or donated to the author.

Collection dates from all sources ranged from February into November (Fig. 2). The flight period of most Asilidae in Virginia occurs during the warm months of May through September, but *Nicocles pictus* (Loew) has an unusual and undescribed cold-season phenology.

The total of 126 species in Virginia compares closely to the 131 species (including 23 hypotheticals) reported for Arkansas (Barnes et al., 2007). Of this total, Virginia shares 83 species, or 63%. The confirmed totals are 115 in Virginia and 108 in Arkansas.

Within Virginia, the understanding of the geographic ranges of species of Asilidae is in its early stages. Some species are apparently widespread, such as *Efferia aestuans* (Linnaeus) (Fig. 3) and *Ommatius tibialis* Say (Fig. 4). Other species, such as *Eudioctria brevis* Banks (Fig. 5) and *Diogmites basalis* (Walker) (Fig. 6), are apparently restricted to the higher elevation western portion, whereas still others are apparently

Species	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.
<i>Nicocles pictus</i>	—————								———	
<i>Lasiopogon marshalli</i>			—————							
<i>Laphria flavicollis</i>				—————						
<i>Eudioctria tibialis</i>					—————					
<i>Ommatius tibialis</i>		-			—————					
<i>Efferia aestuans</i>					—————					
<i>Triorla interrupta</i>					—————					
<i>Diogmites neoternatus</i>						—————				
<i>Laphria affinis</i>						—————				

Fig 2. Flight period phenology of selected Asilidae of Virginia.

restricted to the sandy coastal plain (e.g., *Stichopogon trifasciatus* (Say) [Fig. 7] and *Laphystia litoralis* Curran [Fig. 8]).

ANNOTATED CHECKLIST

Asilinae

Asilus sericeus Say

Albemarle (NMNH), *Alleghany* (PB, VMNH), *Caroline* (NH), *Fairfax* (NMNH), *Grayson* (PB), *Hanover* (PB), *Louisa* (VMNH), *Montgomery* (VT), *Nelson* (NMNH), *Powhatan* (PB), and *Prince Edward* (PB). 31 May-25 Sept.

This uncommon and distinctive large robber fly can be found in tall grass areas such as in unmowed fields or powerline rights-of-way. I have not observed them to perch on top of the grass, but rather down somewhat so that they are slightly hidden.

Efferia aestuans (Linnaeus)

Alleghany (VMNH), *Amelia* (PB), *Augusta* (NH), *Caroline* (NH), *Charles City* (PB), *Chesterfield* (NH, PB), *Fairfax* (NMNH), *Floyd* (NH, VT), *Giles* (VT), *Grayson* (VMNH), *Hanover* (PB, VT), *Mecklenburg* (VMNH), *Montgomery* (VT), *Nelson* (NMNH), *Patrick* (VT), *Roanoke* (Bullington, 1978), *Shenandoah* (NH), *Surry* (NMNH), *Wythe* (VT), and the cities of Chesapeake (NMNH), Norfolk (NMNH), Richmond (VT), Salem (NMNH), Suffolk (VT), and Virginia Beach (NMNH). 19 May-21 Oct.

One of the most common and widespread robber flies in Virginia. This species will perch vertically,

head-up, on grassy stubble. Females can be seen ovipositing in dry stubble as well.

Efferia albibarbis (Macquart)

Culpeper (NH), *Lunenburg* (NH), *Middlesex* (VT), *Northampton* (VMNH), *Richmond* (VT), *Spotsylvania* (VT), *Surry* (NMNH), *York* (VMNH), and the cities of Norfolk (NMNH), Portsmouth (NMNH), Richmond (NMNH), Suffolk (NH), and Virginia Beach (PB, NH). 27 May-29 Sept.

This fairly common species likes open areas, and is especially likely on sandy beaches. Often perches on the ground.

Efferia kondratieffi Bullington & Lavigne

Carroll, *Craig*, *Floyd*, *Giles*, *Grayson*, *Lee*, *Louisa*, *Montgomery*, *Russell* (all Bullington & Lavigne, 1984b), and *Washington* (PB). 26 May-28 July.

A recently described species from western Virginia, closely related to *E. aestuans*.

Efferia plena (Hine)

Charles City (NH) and *Fairfax* (NMNH). 4 July-20 Aug.

Eastern United States records of *E. nemoralis* (Hine) have been redescribed as *E. plena* (Barnes, 2007); *E. nemoralis* is now considered to be restricted to the south-central states. The Charles City Co. record was collected at the Harrison Lake National Fish Hatchery where it was perched on the ground around the ponds. Museum records for this species throughout the East are very sparse (Barnes, 2007).

Fairfax County on the Potomac River just south of Washington, D.C.

***Machimus lecythus* (Walker)**

Alleghany (PB), *Arlington* (MCZ), *Culpeper* (NH), *Cumberland* (NH), *Fairfax* (MCZ, NMNH), *Grayson* (PB), *Richmond* (PB), and *Tazewell* (NMNH). 30 May-22 Aug.

My specimens were collected in rank riparian vegetation or unmowed grasslands.

***Machimus maneei* (Hine)**

Fairfax (MCZ, NMNH), *Nelson* (NMNH), *Prince Edward* (PB), and *Prince William* (PB). 31 May-26 Sept.

***Machimus notatus* (Wiedemann)**

Alleghany (PB), *Augusta* (PB), *Bath* (NH), *Botetourt* (NH), *Chesterfield* (PB), *Dickenson* (PB), *Fairfax* (Mathis, 2008), *Grayson* (PB), *Greene* (NH), *Madison* (PB, NH), *Nelson* (NMNH), *Page* (NH), *Prince Edward* (PB), *Rockingham* (NH), *Suffolk* (PB), and *Wise* (PB). 17 May-21 Aug.

Common and widespread.

***Machimus novaescotiae* (Macquart)**

Chesterfield (PB, NH, VT), *Charles City* (PB), *Culpeper* (NH), *Fairfax* (NMNH), *Grayson* (NH), *Henry* (VMNH), *Loudoun* (NMNH), *Page* (NH), *Powhatan* (PB), *Rappahannock* (NH), *Surry* (NMNH), *Sussex* (PB), and *York* (NMNH). 15 June-19 Sept.

***Machimus paropus* (Walker)**

Fairfax (MCZ, NMNH). 16 July-25 Sept.

This species is more common in states to our north, and may reach its southern limit in northern Virginia.

***Machimus sadyates* (Walker)**

Amherst (PB, VMNH), *Bath* (NH, PB), *Bedford* (NH), *Botetourt* (PB), *Fairfax* (NMNH), *Giles* (VT), *Prince William* (PB), *Wise* (PB), and *Wythe* (VMNH). 14 July-20 Sept.

This seems to be a species of the western part of the state, especially at higher elevations. My specimens are from riparian vegetation.

***Machimus snowii* (Hine)**

Fairfax (MCZ, NMNH), and Dismal Swamp [Chesapeake or Suffolk] (NMNH). 6 July-25 Sept.

***Machimus virginicus* (Banks)**

Chesterfield (PB), *Fairfax* (McAtee & Banks,

1920), *Greene* (NH), *Prince William* (PB), *Rockbridge* (NH), and *Wise* (PB). 28 May-4 Aug.

***Mallophora orcina* (Wiedemann)**

Amelia (PB), *Chesterfield* (PB), *Fairfax* (NMNH), *Goochland* (NMNH), *Nelson* (NMNH), *New Kent* (VMNH), and *Richmond* (NMNH). 22 June-13 Oct.

This species is an excellent bee mimic and can also be mistaken for a *Laphria*, but it occurs after most *Laphria* are done for the season. My records are from woodland edge habitat.

***Megaphorus clausicellus* (Macquart)**

Fairfax (NMNH), *Highland* (PB), *Isle of Wight* (VMNH), *Nelson* (NMNH), *Norfolk* (Cole & Pritchard, 1964), *Nottoway* (VMNH), and *Richmond* (VT, VMNH). 30 June-20 Sept.

***Megaphorus laphroides* (Wiedemann)**

One museum record (NMNH) from Virginia Beach in "September." There is also an 11 August record from Virginia Beach (Cole & Pritchard, 1964).

This is a species of the southeastern states. Its range may be similar to many other taxa in that its northern range limit extends to southeastern Virginia.

***Neoitamus flavofemoratus* (Hine)**

Carroll (PB), *Chesterfield* (PB), *Dickenson* (NH), *Fairfax* (Mathis, 2008; PB), *Floyd* (VMNH), *Giles* (VT), *Grayson* (PB), *Madison* (PB), *Montgomery* (VT), *Page* (NH), *Prince William* (PB), *Rockbridge* (VT), and *Virginia Beach* (PB). 14 May-14 Sept.

A common and widespread woodland species that perches on the end of a twig or small branch. They seem to prefer a perch that is adjacent to an edge situation, e.g., a few feet inside the edge alongside a woodland road rather than conspicuously in the open.

***Neoitamus orphne* (Walker)**

Augusta (NH), *Bath* (NH), *Carroll* (PB), *Greene* (NH), *Highland* (PB), *Page* (NH), *Rockbridge* (NH), *Rockingham* (NH), *Russell* (VMNH), and *Washington* (PB). 30 May-2 July.

A fairly common species in the western portion of the state in similar habitats as its congener.

***Neomochtherus angustipennis* (Hine)**

Arlington (NMNH), *Fairfax* (Hine, 1909), and *King & Queen* (VT). 1 Aug.-13 Sept.

The lone specimen at the NMNH from "Barcroft, Va" includes a pupal case, and was collected from under a pine tree.

***Neomochtherus auricomus* (Hine)**

Fairfax (MCZ, NMNH), *Nottoway* (VMNH), and *Richmond* (VMNH). 13 Aug.-23 Oct.

Apparently a late summer and fall species.

***Philonicus fuscatus* (Hine)**

Albemarle (NH), *Alleghany* (PB), *Bath* (VMNH), *Bedford* (NH), *Botetourt* (PB), *Buckingham* (PB), *Fairfax* (Mathis, 2008), *Fluvanna* (NH), *Goochland* (NH), *Grayson* (NMNH), *Mecklenburg* (VMNH), *Powhatan* (NH), *Prince William* (VMNH), *Richmond* (PB), *Suffolk* (PB), and *Virginia Beach* (NH, NMNH). 16 May-18 Aug.

A widespread riverine species found perched on rocks in the streambed, on the ground along the streamside, or in riparian vegetation.

***Polacantha gracilis* (Wiedemann)**

Isle of Wight (PB), *Richmond* (NMNH), *Sussex* (PB), and *Virginia Beach* (PB). 15 June-11 Sept.

The few records of this southeastern species come from the eastern part of the state. At First Landing State Park, I obtained a pair from the bushy woodland edge behind the guest residence. The 80-year-old specimen at NMNH was taken near the University of Richmond campus, in habitat certainly no longer present.

***Proctacanthus brevipennis* (Wiedemann)**

Caroline (NH), *King & Queen* (VT), *Suffolk* (VT), and *Virginia Beach* (PB, NH, NMNH). 21 May-5 Aug.

Most occurrences are from the southeast corner of the state, where it can be found on open sandy soils and beach dunes. I observed it commonly at First Landing State Park along a powerline cut through the woods.

***Proctacanthus heros* (Wiedemann)**

King & Queen (VT). 24 Sept.

The largest of our asilids is included here based on a single specimen collected in 1938. More common in states to our south.

***Proctacanthus milbertii* Macquart**

Chesterfield (VT), *Richmond* (VT), and *Suffolk* (VT). 11 July-21 Aug.

***Proctacanthus nigriventris* Macquart**

Caroline (NH), *Chesterfield* (VT), *Suffolk* (VT), *Sussex* (PB), and *Virginia Beach* (PB, NMNH). 16 June-26 July.

This large, dark species prefers sandy areas, where it can be common. Females oviposit into sandy substrate. It has a buzzy flight and is probably restricted to the Coastal Plain.

***Proctacanthus philadelphicus* Macquart**

Fairfax (MCZ, NMNH), and *Virginia Beach* (VMNH). 18 Aug-30 Aug.

***Proctacanthus rufus* Williston**

Fairfax (NMNH), *Mecklenburg* (VMNH), *Nelson* (NMNH), *Richmond* (VT), *Richmond* (VT), and *Virginia Beach* (NH, PB). 22 June-5 Aug.

Judging from the number of museum specimens that also include a prey item, this species preys especially on Hymenoptera.

***Promachus bastardii* (Macquart)**

Alleghany (PB), *Fairfax* (NMNH), and *Nelson* (NMNH). 31 May-9 Sept.

My specimens were located in an unmowed, ungrazed field.

***Promachus rufipes* (Fabricius)**

Accomack (VMNH), *Botetourt* (VMNH), *Caroline* (NH), *Charles City* (PB), *Chesterfield* (PB), *Essex* (NH), *Goochland* (NH), *Henrico* (VT), *Henry* (VMNH), *James City* (VT), *Loudoun* (VT), *Louisa* (VMNH), *Montgomery* (VT), *Northampton* (VMNH), *Pittsylvania* (VT), *Portsmouth* (VT), *Prince Edward* (VT), *Prince George* (VMNH), *Prince William* (PB), *Suffolk* (Bullington, 1978; VT), *Warren* (VT), *Westmoreland* (VMNH), *Winchester* (VT), *Wise* (PB), and *York* (NH). 3 June-26 Oct.

This large and conspicuous species becomes fairly common in mid-summer, and can be observed especially during August.

***Triorla interrupta* (Macquart)**

Buckingham (PB), *Charles City* (PB, NH), *Chesterfield* (PB), *Cumberland* (NH), *Goochland* (PB), *Henrico* (VMNH), *Henry* (PB), *Isle of Wight* (PB), *Louisa* (PB), *Richmond* (VT), and *Virginia Beach* (NH). 8 June-30 Sept.

This rather large species appears to be fairly common statewide east of the mountains. It will attack prey on the ground, especially orthopterans.

Brachyrhopalinae

***Ceraturgus aurulentus* (Fabricius)**

Fairfax (NMNH). 18 Sept.

A very rare species. "Fewer than two dozen specimens have been collected in the past 200 years" (Barnes, 2008). The Virginia specimen was collected "near Plummer's Island", which is in the Potomac Gorge just west of Washington, D.C.

***Ceraturgus elizabethae* Brimley**

Arlington (NMNH), *Fairfax* (NMNH), and *Nelson* (NMNH). 20 June-18 July.

The last specimen collected in Virginia was taken in 1928. Nelson County is represented by four specimens at the NMNH spanning the years 1913-1928, but labeled without habitat or specific locality data.

***Ceraturgus fasciatus* Walker**

Arlington (Barnes, 2008), *Fairfax* (NMNH), *Floyd* (NH), *Hanover* (PB), *Highland* (NH, VMNH), *Montgomery* (VT), *Nelson* (NMNH), *Pittsylvania* (VT), *Richmond* (VMNH), and *Rockingham* (Barnes, 2008). 23 May-30 Aug.

This species, the most common and widespread member of the genus, was recently resurrected and split from the Midwestern *C. cruciatus* (Say) (Barnes, 2008). It is a mimic of *Vespa* wasps. My Hanover Co. specimen was found in an unmowed pasture of native forbs and grasses in a powerline right-of-way.

***Ceraturgus mitchelli* Brimley New state record!**

Alleghany (PB) and *Carroll* (PB). 28 May-30 May.

These records are the first for Virginia. One was taken in rank riparian vegetation, the other in tall grass in a meadow. This species may be more common than realized. Two days after I obtained the specimen in Alleghany County, I, along with Giff Beaton, Steve Krotzer, and Mike Thomas, took three more from a grassy meadow at Crooked Creek Wildlife Management Area in Carroll County.

***Cyrtopogon laphriformis* Curran New state record!**

Dickenson (PB). 2 June.

I collected a female specimen from low riparian vegetation along the Russell Fork River at Breaks Interstate Park on 2 June 2008 while it was perched on a leaf. Previously known only from New Hampshire and Pennsylvania (Fisher & Wilcox, 1997), this is the first record for Virginia.

***Cyrtopogon lutatius* (Walker)**

Fairfax (NMNH), *Montgomery* (VT), and *Prince William* (PB).

Three specimens were obtained in a Malaise trap run from 20 April to 27 May 2010 by A. V. Evans in the Bull Run Mountains. There is one specimen from Fairfax Co. collected on 24 May. The Montgomery Co. specimen was taken in a Malaise trap in a pasture, also on 24 May.

***Cyrtopogon marginalis* Loew**

Back (1909) mentions a female specimen from "Va." with no details. Melander (1923) includes

Virginia in its range, probably based on Back's record. I have not found any other museum or literature citations. Fisher & Wilcox (1997) list the range as "Ont. to N.H., s. to Mich. and Ga."

***Heteropogon macerinus* (Walker)**

Augusta (NMNH), *Fairfax* (MCZ, NMNH), *Franklin* (Dennis et al., 2008), *Montgomery* (VT), and *Stafford* (VMNH). 30 July-16 Oct.

This is an uncommon late summer to autumn species. Dennis et al. (2008) report pupal cases with pinned adults labeled "Rockymount, VA" from the Charles Triplehorn Insect Collection at Ohio State University.

***Holopogon guttulus* (Wiedemann)**

Fairfax (NMNH).

There is only one specimen at NMNH from "Mt. Vernon" captured on 4 July. Martin (1959) states that "Collecting records indicate that *guttula* (sic) is primarily a spring species."

***Holopogon oriens* Martin New state record!**

Carroll (M. Thomas, pers. comm.; PB) and *Washington* (PB). 1 June-2 July.

My Carroll Co. specimen, apparently the first state record, was collected in an unmowed old field. Mike Thomas also collected a specimen at Crooked Creek Wildlife Management Area on the same day. Only four museum specimens were located, all at the NMNH with none from Virginia.

***Holopogon phaeonotus* Loew**

Alleghany (PB), *Chesterfield* (PB), *Fairfax* (NMNH), *Hanover* (PB), *Madison* (PB), *Prince Edward* (PB), *Rockbridge* (PB), *Rockingham* (NMNH), and *Washington* (PB). 12 May-9 July.

I have found this species to be very common at Pocahontas State Park, and have recorded as many as 50 individuals during a field outing.

***Nicocles pictus* (Loew)**

Chesterfield (PB), *Fairfax* (NMNH), and *Nelson* (PB). 12 Feb.-12 May and 7 Oct.-7 Nov.

This cold tolerant species is the first asilid to emerge in the late winter and early spring. I have found them along roadsides in second growth woods. Males perch on unopened buds at the tip of a twig or small branch and slowly move their abdomen up and down. This movement makes the silvered and highly reflective tip of the abdomen (Fig. 1) appear to flash in the sunlight. Males can also be observed hovering in front of perched females. *Nicocles* is our only genus of asilid with spotted wings. I have observed this species on

the remarkably early date of 12 February, and have collected specimens as early as 3 March. I have also taken this species in the fall, making it possibly our only asilid with two broods, unless the fall adults overwinter.

***Nicocles politus* (Say)**

King & Queen (VT). 10 Oct.-13 Oct.

McAtee & Banks (1920) recorded dates for the Washington, D.C. area from 14 August to 2 October.

Dasyopogoninae

***Diogmites basalis* (Walker)**

Alleghany (PB), *Fairfax* (NMNH), *Montgomery* (VT), *Nelson* (NMNH), *Roanoke* (VT), and *Wythe* (NMNH). 17 May-19 Sept.

This northeastern species is apparently found in Virginia primarily in the mountainous western counties. My specimen was taken in the same overgrown pasture where I found *D. discolor*.

***Diogmites discolor* Loew**

Alleghany (PB), *Arlington* (MCZ), *Augusta* (VT), *Fairfax* (MCZ, NMNH), *Floyd* (PB, VMNH), *Frederick* (VT), *Giles* (NH), *Loudoun* (VT), and *Nelson* (NMNH). 6 May-13 Sept.

***Diogmites misellus* Loew**

Chesterfield (NH), *Fairfax* (MCZ, NMNH), *Powhatan* (NH), and the cities of Hopewell (VT), Newport News (NMNH), Norfolk (NMNH), Richmond (NMNH, VT), and Suffolk (NMNH). 22 June-29 Sept.

***Diogmites neoternatus* (Bromley)**

Amelia (PB), *Arlington* (NMNH), *Bedford* (VT), *Buckingham* (NH), *Chesterfield* (NH, PB), *Chesapeake* (VMNH), *Cumberland* (NH), *Essex* (VMNH), *Greensville* (VMNH), *Louisa* (VMNH), *Mecklenburg* (VMNH), *Montgomery* (VMNH), *Richmond* (PB, VT), *Richmond* (VMNH), *Rockbridge* (VT), *Shenandoah* (NH), and *Virginia Beach* (PB, VMNH). 19 July-7 Oct.

The most common *Diogmites* in my experience, at least in the Piedmont. This species has entered my house on several occasions, but they are difficult to find in my yard if I deliberately seek them.

***Diogmites salutans* Bromley**

Isle of Wight (Bromley, 1936).

The only record for Virginia comes from Bromley's (1936) original description of the species. He indicates a lone female from "Smithfield, Va." with no date or additional locality information. A photograph, possibly

of this species, was taken by Tom Murray in the Dismal Swamp on 11 August 2007. It should be sought in southeastern Virginia.

***Taracticus octopunctatus* (Say)**

Arlington (MCZ, NMNH), *Chesterfield* (PB), *Fairfax* (MCZ, NMNH), *Suffolk* (MCZ), and "Lake Drummond" [Chesapeake or Suffolk] (NMNH). 11 May-31 July.

I have observed this small, attractive species in my yard. It would perch on a sunlit leaf within a foot of the ground in an area of wild grape and very small hardwood saplings. Possibly a generalist species that is more common than the few records indicate.

Dioctriinae

***Echthodopa formosa* (Loew)**

I am not aware of any museum specimens from Virginia, nor have I observed this species in the field. Its range is described as "Mass. to Miss. and Ga." (Fisher & Wilcox, 1997), but records within this range are few and scattered (Adisoemarto & Wood, 1975). Back (1909) lists Virginia without details, so I include it here rather than in the hypothetical list. Three specimens at the NMNH are from "Cheat Mountain, West Virginia." This location in Randolph County is not very far west of Highland County, Virginia.

***Eudioctria albius* (Walker)**

Augusta (NMNH, PB), *Bath* (NH), *Carroll* (NH, PB), *Giles* (VT), *Grayson* (PB), *Highland* (PB), *Nelson* (NMNH), "Skyland" [Shenandoah National Park on the *Page/Madison* county line] (NMNH), *Virginia Beach* (NH), and *Washington* (PB). 22 May-9 Sept.

***Eudioctria brevis* Banks**

Augusta (PB), *Carroll* (NH, PB), *Dickenson* (PB), *Floyd* (NH), *Grayson* (NH, PB), *Montgomery* (VT), *Prince William* (PB), and *Wise* (NH). 6 May-20 June.

***Eudioctria tibialis* (Banks)**

Arlington (NMNH), *Carroll* (PB), *Fairfax* (Mathis, 2008, NMNH), *Loudoun* (NMNH), *Prince Edward* (PB), and *Stafford* (NMNH). 22 May-9 July.

My male specimen is of the variety *tibialis* with the basal half of the tibiae yellow. The behavior of this species has been studied in Maryland (Scarborough, 1981). The study sites were in forest clearings where *E. tibialis* first emerged in early June, rapidly reached maximum abundance, and was largely gone by mid-July. Adults were estimated to have a lifespan of two to three weeks.

Laphriinae

***Andrenosoma fulvicaudum* (Say)**

This genus was out on loan at the NMNH, so I was unable to record specimen data there and did not find any Virginia material of this species in the other collections that I examined, nor did I encounter it in the field. It has a wide continental range, but there are few Virginia records. McAtee & Banks (1920) list dates from Great Falls [*Fairfax Co.*] of 10-12 July and from Washington, D.C. on 22 August. A grayish species with the distal end of the abdomen golden-yellow, which makes this species distinctive in the field. In British Columbia, Cannings (2010) states "It is attracted to forest fires; the females lay eggs in burned trees where the larvae prey on buprestid beetle larvae."

***Atomosia glabrata* (Say)**

Arlington (NMNH), *Fairfax* (MCZ, NMNH), and *Suffolk* (MCZ). 11 June-14 Sept.

Widely distributed in eastern North America, but apparently rare and local (Barnes, 2008).

***Atomosia puella* (Wiedemann)**

Alleghany (PB), *Amelia* (PB), *Arlington* (NMNH), *Bath* (VT), *Charles City* (PB), *Chesapeake* (NMNH), *Chesterfield* (NH, PB), *Dismal Swamp* [*Chesapeake* or *Suffolk*](NMNH), *Fairfax* (NMNH), *Floyd* (NH), *Giles* (VT), *Hanover* (PB), *Highland* (PB), *Hopewell* (NMNH), *Loudoun* (NMNH), *Madison* (PB), *Montgomery* (VT), *Page* (NMNH), *Prince Edward* (PB), *Richmond* (VT), and *Rockingham* (NMNH). 12 May-4 Aug.

This may be one of the most common asilids in the state. Adults seem to perch on any available sunny upright surface including tree trunks, fence posts, logs, rocks, chairs, etc. and have a distinctive head-down posture. Adaptable and ubiquitous, I have recorded them from near the summit of Whitetop Mountain (elev. >5000 ft.), on a tree trunk in my suburban Chesterfield Co. yard, on a motel wall, pasture fencing, and on lawn furniture to give a few examples. They are easily overlooked due to their tiny size, but after one develops a search image, they can be found in many locations.

***Atomosia rufipes* Macquart**

Arlington (MCZ, NMNH), *Fairfax* (MCZ, NMNH), *Goochland* (PB), *Loudoun* (NMNH), *Nelson* (NMNH), and *Virginia Beach* (MCZ). 20 June-9 Sept.

My only record was one serendipitously captured when it was trapped inside a vehicle.

***Atomosia sayii* Johnson**

Fairfax (MCZ, NMNH) and *Winchester* (VT). 29 June-26 Aug.

McAtee & Banks (1920) record this species as "Common, June 10 to September 5", but the few museum records and my own field experience do not support that observation.

***Cerotainia albipilosa* Curran**

Fairfax (NMNH), *Floyd* (NH, PB), *Grayson* (NH, PB), "Thoroughfare Gap" [*Prince William*] (NMNH), and *Richmond* (PB). 3 June-27 July.

This species has been studied at a woodland site in Maryland where the seasonal distribution spanned early July until early September (Scarborough & Norden, 1977). Yearly occurrence varied from seven to ten days depending on spring temperatures or rainfall patterns.

***Cerotainia macrocera* Say**

Amelia (PB), *Charles City* (NH), *Chesterfield* (NH, PB), *Fairfax* (NMNH), *Floyd* (NH), *Grayson* (NH, PB), *Hampton* (VT), and *Powhatan* (PB). 21 May-22 Sept.

A study of the asilid fauna at three sites in Maryland found *C. macrocera* to be the most common species in all locations (Scarborough, 1974). The author noted that "*C. macrocera* forages one to two meters from low sunlit shrubs and stems of erect dead herbs located along the margin of temporary streams." I have seen them perched on poison ivy (*Toxicodendron radicans*) alongside a forest road, and on the tips of pawpaw (*Asimina triloba*) leaves.

***Lampria bicolor* (Wiedemann)**

Amelia (PB), *Charles City* (PB), *Fairfax* (NMNH), *Loudoun* (NMNH), and *Richmond* (NH, PB). 23 May-21 Aug.

I have found this uncommon species in riparian deciduous woods such as at James River Park in Richmond, and in woodland edge habitats. Perches on leaves.

***Laphria affinis* Macquart**

Caroline (NH), *Charles City* (PB), *Fairfax* (NMNH), *Floyd* (NH), *Isle of Wight* (PB), *King & Queen* (VT), *King William* (VT), *Montgomery* (VT), *Suffolk* (VMNH), *Surry* (PB), *Sussex* (PB), and *Virginia Beach* (NMNH). 21 July-16 Nov.

Unlike the rest of the genus, this variably large species occurs in late summer and fall.

***Laphria aktis* McAtee**

Carroll (PB), *Dickenson* (NH, PB), *Fairfax*

(McAtee, 1918; Bullington, 1986), *Floyd* (Bullington, 1986; NH), *Giles* (Bullington, 1986), *Loudoun* (Bullington, 1986; NH), and *Nelson* (Bullington, 1986). 7 May–27 July.

A beautiful golden fly, fairly common in early summer. Perches within a few feet of the ground on leaves that afford a good view of passing prey. Apparently more common than the very similar *L. sericea*.

***Laphria canis* Williston**

Arlington (Bullington, 1986), *Chesterfield* (Bullington, 1986), *Dickenson* (PB), *Fairfax* (Bullington, 1986; Mathis, 2008; NMNH), *Giles* (Bullington, 1986), *Grayson* (Bullington, 1986), *Highland* (Bullington, 1986), *Montgomery* (Bullington, 1986), *Page* (Bullington, 1986), and *Norfolk* (Bullington, 1986). 29 May–14 Aug.

***Laphria champlainii* (Walton)**

Warren (VT). 20 Aug.

A northeastern species. Fisher & Wilcox (1997) list the range as “Pa.; Ohio, N.Y., Mass., Conn., N.J.” However, Bullington (2008) claims to have “collected it many times in southwestern Virginia.”

***Laphria cinerea* (Back)**

Chesterfield (NH, PB), *Dinwiddie* (NMNH), *Isle of Wight* (PB), and *Richmond* (VT). 15 April–29 May.

One of the first robber flies of spring, this small *Laphria* can be identified in the field by the ashy color of the thick tufts of hair on the legs and abdomen. Found perched on logs in pine woods.

***Laphria divisor* (Banks)**

Albemarle (NH), *Fairfax* (NMNH), *Giles* (NMNH), *Montgomery* (VT), *Page* (NH), and *Rockbridge* (VT, NH). 4 June–25 Aug.

***Laphria flavicollis* Say**

Alleghany (PB), *Amelia* (PB), *Augusta* (NMNH, PB), *Buckingham* (NH), *Carroll* (PB), *Charles City* (PB), *Chesapeake* (NMNH), *Chesterfield* (PB), *Dickenson* (NH, PB), *Fairfax* (Mathis, 2008; NMNH), *Floyd* (NH), *Fluvanna* (PB), *Giles* (NMNH), *Goochland* (NH), *Grayson* (PB), *Hanover* (PB), *Henrico* (VMNH), *Highland* (NH), *Montgomery* (VT), *Nelson* (NMNH), *Page* (NMNH), *Pittsylvania* (VMNH), *Powhatan* (PB), *Prince Edward* (PB), *Prince William* (PB), *Richmond* (NH), *Rockbridge* (NH), *Rockingham* (NH), and *Surry* (NMNH). 27 April–8 Aug.

Common and widespread in deciduous woods where it perches low on rank vegetation or tree leaves

in sunlit areas. Probably our most abundant *Laphria*. A specimen in my collection was captured with the scorpionfly *Panorpa nebulosa* Westwood as prey.

***Laphria grossa* (Fabricius)**

Alleghany (VMNH), *Bath* (VT), *Giles* (NMNH), *Fairfax* (NMNH), *Nelson* (NMNH), *Prince Edward* (PB), *Richmond* (NMNH), and *Wise* (NMNH). 1 June–15 Aug.

As the name implies, this species is very robust, with a loud, buzzy flight.

***Laphria index* McAtee**

Chesterfield (PB), *Dickenson* (PB), *Fairfax* (NMNH), *Giles* (Bullington, 1986), *Greene* (NH), *Madison* (PB), *Montgomery* (Bullington, 1986), *Page* (Bullington, 1986), *Powhatan* (PB), *Prince Edward* (PB), *Richmond* (NH), and *Washington* (PB). 6 May–23 July.

A beautiful, common species of deciduous woodland edge.

***Laphria ithypyga* McAtee**

Dickenson (PB), *Fairfax* (Mathis, 2008), and *Virginia Beach* (PB). 1 June–10 July.

My records come from opposite ends of the state. The Virginia Beach specimens were captured in a Malaise trap and a UV light trap. The Dickenson Co. specimen is from Breaks Interstate Park in dry woods.

***Laphria posticata* Say**

Augusta (NH), *Dickenson* (PB), and *Fairfax* (McAtee & Banks, 1920). 4 June–9 Aug.

***Laphria sacrorator* Walker**

Rockingham (NH). 7 June.

Listed for Virginia in Geller-Grimm (2009), but I have been unable to determine the source of this record.

***Laphria saffrana* Fabricius**

Fairfax (McAtee, 1920), *Nelson* (NMNH), *Prince Edward* (PB), *Richmond* (VT), and *Sussex* (PB). 22 May–11 July.

A striking and distinctive species, it is possibly a mimic of the *Vespula squamosa* (Drury) queen. Probably more common in southern counties, especially in sandy pine woods. Has a loud buzzing flight, and will perch low to the ground on logs.

***Laphria sericea* Say**

Alleghany (PB, VMNH), *Dickenson* (PB), *Fairfax* (NMNH), *Giles* (McAtee, 1918), *Madison* (NMNH), *Montgomery* (VT), *Page* (NMNH), and *Wise* (PB). 7 May–5 Sept.

***Laphria sicula* McAtee**

Bath (PB), *Chesterfield* (NH, PB), *Fairfax* (Mathis, 2008; NMNH), *Powhatan* (PB), *Pulaski* (VT), *Richmond* (PB), *Sussex* (PB), and *Wise* (PB). 24 June-21 Aug.

Very common and widespread. Perches low to the ground on deciduous leaves. This is the most frequently observed asilid in my suburban Chesterfield Co. yard.

***Laphria thoracica* Fabricius**

Dickenson (PB), *Fairfax* (Mathis, 2008), *Frederick* (VT), *Giles* (NMNH), *Grayson* (NH, PB), *Madison* (PB), *Montgomery* (VT), *Nelson* (NMNH), *Richmond* (VMNH), *Rockingham* (NH), *Tazewell* (VT), *Winchester* (VT), and *Wise* (NH). 6 May-27 Aug.

This medium to large species is widespread in deciduous woods. Rather variable in appearance.

***Laphria virginica* (Banks)**

Caroline (NH), *Chesterfield* (PB), *Dickenson* (PB), *Fairfax* (NMNH), *Henry* (VMNH), *James City* (PB), *Montgomery* (VT), *Nelson* (NMNH), *Page* (NMNH), *Powhatan* (PB), *Sussex* (PB), and *Virginia Beach* (NMNH). 26 April-4 Aug.

This fairly common species can be found in sunlit areas of deciduous woods, or in more open areas such as clearcuts. It will perch on a sunny leaf within a few feet of the ground, or on a log.

***Laphria winnemana* McAtee**

Carroll (NH), *Fairfax* (NMNH), *Giles* (Bullington, 1986), *Grayson* (PB), *Montgomery* (Bullington, 1986), *Nelson* (NMNH), *Page* (Bullington, 1986), and *Roanoke* (Bullington, 1986). 2 June-11 Sept.

This small woodland species is very similar to *L. canis* and *L. sicula*. Most records are from western Virginia.

***Laphystia litoralis* Curran**

Accomack (VMNH), *Northampton* (VMNH), and *Virginia Beach* (NH, NMNH). 20 June-28 Sept.

This species is apparently restricted in Virginia to coastal sand beaches and dunes, where it can be abundant.

***Pogonosoma dorsatum* (Say)**

Chesapeake (NMNH), *Chesterfield* (PB), *Fairfax* (McAtee & Banks, 1920), *Richmond* (VMNH), *Sussex* (PB), and *Virginia Beach* (NH). 22 May-5 Aug.

This glossy, black-bodied and dark-winged species is a black wasp-mimic, perhaps of *Anoplius* spider wasps. Found in pine woods, they will perch horizontally on downed pine logs or head down on tree

trunks. Usually scarce, but I observed up to six individuals at Pocahontas State Park in pine woods on 3 July.

Leptogastrinae

***Apachekolos tenuipes* (Loew)**

Arlington (MCZ), *Bath* (PB, VMNH), *Chesterfield* (NH, PB), *Fairfax* (MCZ, NMNH), *Madison* (NH), and *Warren* (VT). 29 June-20 Sept.

My specimens were collected in dry woods. Collection dates for five NMNH specimens ranged from 22 August to 20 September, but a study in Maryland showed *A. tenuipes* to appear in late spring, with flight dates ranging from the first of June through early July (Scarborough, 1974).

***Beameromyia difascia* Martin**

Fairfax (MCZ, NMNH). 16 June-26 June.

Two paratype specimens located at the MCZ of this very small species were collected at Falls Church.

***Beameromyia floridensis* (Johnson)**

Virginia Beach (Martin, 1957). 13 Aug.-26 Aug.

Possibly a coastal species.

***Beameromyia pictipes* (Loew).**

Alleghany (PB), *Amelia* (PB), *Suffolk* (PB), and *Virginia Beach* (NH, PB). 15 June-30 July.

McAtee & Banks (1920) give dates of 4 June to 26 September in Washington, D.C. I found it to be common in grass on beach sand dunes at First Landing State Park. I have also found this tiny species in unmowed old field habitat.

***Beameromyia vulgaris* Martin**

Alexandria (NMNH) and *Fairfax* (MCZ, NMNH). 9 June-11 Sept.

Three Maryland specimens at the NMNH were collected on "waste ground."

***Leptogaster atridorsalis* Back**

Arlington (NMNH), *Charles City* (PB), *Essex* (VMNH), *Fairfax* (Martin, 1957), *Greensville* (VMNH), and *Virginia Beach* (VT). 17 June-19 Aug.

***Leptogaster brevicornis* Loew**

Amelia (PB), *Arlington* (NMNH), *Chesterfield* (NH, PB), *Fairfax* (MCZ, NMNH), *Greensville* (VMNH), *Powhatan* (PB), *Suffolk* (MCZ), and *Virginia Beach* (NH, NMNH). 11 June-13 Aug.

This is the most frequently encountered *Leptogaster* in Virginia in my experience.

***Leptogaster flavipes* Loew**

Arlington (MCZ), *Chesterfield* (PB), *Fairfax* (MCZ, NMNH), *Greensville* (VMNH), *Loudoun* (MCZ), *Prince William* (NMNH), *Shenandoah* (NMNH), and *Wise* (PB). 25 May-14 Aug.

In Maryland, this species was most abundant in July, though it was present in smaller numbers in June and early August (Scarborough & Sipes, 1973); it occurred in more humid areas of forests and was absent from dry areas. I have obtained specimens from my shaded, wooded yard in suburban Chesterfield Co. This indicates to me that this species is more common than existing records would indicate. Its secretive nature and insubstantial appearance cause it to be easily overlooked. I have observed this species to be active as early as 0730 h in June.

The type specimen of *L. loewi* (Banks) at the Harvard Museum of Comparative Zoology (MCZ) is from Paeonia Springs, Loudoun Co., VA. This species is regarded as a synonym of *L. flavipes* (Martin, 1957).

***Leptogaster incisuralis* Loew**

Arlington (Martin, 1957), *Augusta* (NMNH), and *Fairfax* (MCZ, NMNH). 9 June-6 Sept.

***Leptogaster virgata* Coquillett**

Arlington (MCZ), *Fairfax* (MCZ, NMNH), *Loudoun* (MCZ), *Prince William* (PB), *Rockingham* (NMNH), and "Upton" (probably *Arlington*) (NMNH). 21 June-3 Sept.

***Psilonyx annulatus* (Say)**

Cumberland (VMNH), *Fairfax* (Martin, 1957; NMNH), *Greensville* (VMNH), *Montgomery* (VT), *Richmond* (NMNH), *Shenandoah* (MCZ), and *Wise* (VT). 10 May-17 Sept.

***Tipulogaster glabrata* (Wiedemann)**

Augusta (Martin, 1957), *Fairfax* (MCZ, NMNH), *Floyd* (NH), *Grayson* (PB), *Highland* (PB), *Louisa* (PB), *Sussex* (PB), and *Virginia Beach* (NH). 15 June-17 July.

Ommatiinae

***Ommatius floridensis* Bullington & Lavigne**

Amelia (PB), *Hanover* (Bullington & Lavigne, 1984a), *Mecklenburg* (VMNH), *Northampton* (NMNH), *Prince Edward* (PB), *Suffolk* (Bullington & Lavigne, 1984a), and *Virginia Beach* (Bullington & Lavigne, 1984a). 31 May-1 Aug.

Range in Virginia probably limited to the Piedmont and Coastal Plain.

***Ommatius gemma* Brimley**

Bath (NH), *Essex* (VMNH), *Fairfax* (NMNH), *Greensville* (VMNH), *Isle of Wight* (PB), *Mecklenburg* (VMNH), *Roanoke* (Bullington & Lavigne, 1984a), *Virginia Beach* (NH, PB), and *Wise* (PB). 1 July-11 Oct.

The smallest member of this genus, and occurring later in the season. I have found this species in fairly shaded forest interior.

***Ommatius ouachitensis* Bullington & Lavigne**

Fairfax (NMNH). The only Virginia specimen is from Great Falls on 23 June.

The population in Montgomery Co., Maryland, and this adjacent record from Virginia, may represent an isolated eastern population of this mostly Midwestern species (Bullington & Lavigne, 1984a).

***Ommatius tibialis* Say**

Bath (PB, VMNH), *Charles City* (VT), *Chesterfield* (PB), *Essex* (VMNH), *Fairfax* (NMNH), *Floyd* (NH), *Grayson* (PB), *Greensville* (VMNH), *Henrico* (Bullington & Lavigne, 1984a), *Louisa* (VMNH), *Madison* (Bullington & Lavigne, 1984a), *Mecklenburg* (VMNH), *Montgomery* (Bullington & Lavigne, 1984a), *Page* (Bullington & Lavigne, 1984a), *Prince Edward* (PB), *Rockingham* (VT), *Sussex* (PB), *Virginia Beach* (NMNH), *Wise* (VT), and *York* (Bullington & Lavigne, 1984a). (26 March); 30 May-1 Sept.

The specimen from Essex County is from the remarkably early date of 26 March. This species is usually not seen until after the first of June. Common and widespread. It perches horizontally on stems and twigs, but not on the endbud.

***Ommatius wilcoxi* Bullington & Lavigne**

Chesterfield and *York* (both Bullington & Lavigne, 1984a).

A paratype specimen in the Virginia Tech Department of Entomology collection was captured at Presquile National Wildlife Refuge (Chesterfield Co.) on 6 August 1971.

Stichopogoninae

Lasiopogon appalachensis* Cannings*New state record!**

Dickenson (PB). 1 June.

Specimens of this newly described species were found to be fairly common on the rocks in the streambed of the Russell Fork River at Breaks Interstate Park and represent a new record for the state. Previously known only from KY, WV, and TN

(Cannings, 2002). Identification was confirmed by R. Cannings (pers. comm.).

***Lasiopogon marshalli* Cannings**

Alleghany (PB), *Carroll* (PB), *Chesterfield* (PB), *Giles* (Cannings, 2002), and *Richmond* (PB). 1 April-27 May.

This species was described in 2002 from the banks of the New River in Giles County, but my collections reveal that it is more widespread. I have collected it on Potts Creek south of Covington where it perched on rocks in the streambed. I have also captured specimens along sandy banks of the James River in Richmond and along Third Branch in Pocahontas State Park.

***Lasiopogon opaculus* Loew**

Chesterfield (PB) and *Petersburg* (Cannings, 2002). 26 April-9 May.

I initially misidentified many of my *L. marshalli* specimens as *L. opaculus*, because the key in Cannings (2002) couplet 11 relies on katatergite color (dark brown/black vs. white or pale yellow) that is apparently more variable than previously understood (R. Cannings, pers. comm.). This species is most common around the Great Lakes, and again in states to our south. Its status in Virginia is poorly understood.

***Lasiopogon slossonae* Cole & Wilcox**

Glencarlyn [*Arlington*] (Cannings, 2002) and *Carroll* (M. Thomas, pers. comm.). 23 April-30 May.

A female specimen from the VMNH has no locality data. Mike Thomas caught a male along Crooked Creek in Carroll County at a spot where *L. marshalli* was common on a gravelly sandbar.

***Lasiopogon terricola* (Johnson)**

Fairfax (MCZ). 30 April-19 May.

McAtee & Banks (1920) describe *L. terricola* as “common ... in bare sandy areas, often along paths on roads; April 17 to July 16.” I have not seen this species, but the dry habitat is apparently quite different from the rest of the genus, which is riparian.

***Lasiopogon woodorum* Cannings**

Alleghany (PB) and *Great Falls* [*Fairfax*] (Cannings, 2002). 2 May-30 June.

***Stichopogon trifasciatus* (Say)**

Accomack (VMNH), *Fairfax* (McAtee & Banks, 1920), *James City* (PB), and *Virginia Beach* (NH, VT). 22 June-9 Sept.

This species is restricted to sandy shores of rivers and beaches of the Coastal Plain, where it can be

common. Its size and behavior remind one of a tiger beetle (*Cicindela*).

***Townsendia nigra* Back**

Virginia Beach (MCZ). 13 June.

Our smallest asilid (4-5 mm). Originally described in 1909 from coastal New Jersey, this species is poorly known, and quite possibly overlooked due to its tiny size. I located three specimens at MCZ, which were collected in 1938 at “Cape Henry” by A. M. Brues. Its range and habitat may be similar to other sand-loving coastal species such as *Laphystia litoralis* and *Stichopogon trifasciatus*.

Trigonomiminae

Holcocephala abdominalis and *H. fusca* are very closely related. They are listed here as possible separate species, but their status is actually undetermined (E. Fisher, pers. comm.).

***Holcocephala abdominalis* (Say)**

Fairfax (NMNH), *Giles* (VT), *Grayson* (VMNH), *Montgomery* (VT), *Smyth* (VT), and the cities of *Charlottesville* (NMNH), *Emporia* (NMNH), and *Hampton* (VT), as well as the *Dismal Swamp* [*Chesapeake* or *Suffolk*] (NMNH). 1 July-18 Oct.

***Holcocephala calva* (Loew)**

Alleghany (PB), *Arlington* (NMNH), *Bath* (PB), *Fairfax* (NMNH), and *Floyd* (NH). 14 July-11 Aug.

I have found this species in an old field where it occurred with *H. fusca*.

***Holcocephala fusca* Bromley**

Alleghany (PB), *Amelia* (PB), *Bath* (PB), *Chesterfield* (PB), *Fairfax* (NMNH), *Floyd* (NH), *Greene* (NH), *Madison* (NH), *Montgomery* (VT), *Page* (NH), *Rappahannock* (NH), *Rockingham* (NH), and *Sussex* (PB). 21 July-11 Oct.

Near *Fairfax*, Virginia, *H. fusca* occurred along forest edges adjacent to large open areas rather than small forest clearings, and was never observed in the shaded forest interior (Dennis, 1979). They generally foraged from twig tips of blackberry and rose, from 30 to 120 cm above the ground.

Possible Species

The following species may be discovered in Virginia with future collecting, but I am not currently aware of any confirmed records for the state.

Cyrtopogon alleni Back

Fisher & Wilcox (1997) indicate that the range of this species includes "Mass., s. to Ga." Brimley (1922) collected it (along with *C. fallo*) at "Spruce", North Carolina in late May.

Cyrtopogon fallo (Walker)

I have collected this species in early June in Pocahontas County, West Virginia. It likely occurs at higher elevations in western Virginia.

Cyrtopogon lyratus Osten Sacken

Another hypothetical *Cyrtopogon*, it has been recorded in Pennsylvania and North Carolina. The North Carolina record is from the Black Mountains, about 5000 ft. [1524 m] (Brimley, 1922). To be sought at higher elevations in Virginia.

Diogmites crudelis Bromley

The largest *Diogmites* is a southeastern species with records from North Carolina to Florida (Artigas, 1966). A photograph apparently of this species was taken by Allen Bryan in Sussex County. It should be sought in southeastern Virginia.

Diogmites platypterus Loew

There are no Virginia records to my knowledge, but Fisher & Wilcox (1997) list the range as including "Md. s. to Tex. and Ga." This fairly large, dark-bodied and smoky-winged species should be easy to identify in the field and hard to overlook (unless mistaken for a wasp). Judging by museum specimens, *D. platypterus* is a Midwestern species, but there are a few scattered eastern records.

Eudioctria propinqua (Bromley)

I found only three specimens at NMNH: two from the White Mountains NH, and one from Great Smoky Mountains National Park. There are no Virginia records in Wilcox & Martin (1941). The distribution described in Adisoemarto & Wood (1975) is similar to that of *E. albius*, but there are no Virginia records indicated on the map.

Lampria rubriventris (Macquart)

No museum specimens or literature records were found for Virginia, but Fisher & Wilcox (1997) list the range as "Pa. to Fla." The type specimen is from Pennsylvania, and there are fourteen specimens from North Carolina in the Insect Collection at North Carolina State University as listed in their online inventory database. This species seems to be fairly widespread in the East, so it should eventually be found in Virginia.

Lasiopogon currani Cole & Wilcox

Cannings (2002) describes the range as "southeastern Ontario south to Georgia in, and east of, the Appalachian Mountains." The absence of Virginia records is likely a reflection on our lack of knowledge of its habitat and phenology.

Neomochtherus latipennis (Hine)

Range includes "N.H. s. to N.C." (Fisher & Wilcox, 1997). I have not found any museum specimens or state literature records for this apparently little known species.

Proctacanthus hinei Bromley

The range is described by Fisher & Wilcox (1997) as "Ont. to Mass., s. to Tex. and N.C." However, I have not seen any museum specimens or literature references from Virginia, nor have I encountered it in the field.

Proctacanthus longus (Wiedemann)

Both Fisher & Wilcox (1997) and Geller-Grimm (2009) list Virginia within the range, but I have not found the reference for this occurrence. There is only one specimen at the NMNH and it is from Georgia. There are eight specimens from North Carolina in the Insect Collection at North Carolina State University as listed in their online inventory database.

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