

List of the Sawflies (Hymenoptera: Symphyta) of Virginia

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ABSTRACT

Confirmed records for 345 species of sawflies in 11 families are cited for Virginia. The results are based on extensive Malaise trap collecting at several sites, mainly in northern Virginia, and data from museum specimens. A list of 23 potential species likely to occur in Virginia is given. County records and recorded host plants are given for each species.

Key words: Argidae, Cephidae, Cimbicidae, Diprionidae, Orussidae, Pamphiliidae, Pergidae, Siricidae, Tenthredinidae, Xiphydriidae, Xyelidae.

INTRODUCTION

Sawflies, a general term for members of the suborder Symphyta (Hymenoptera), are, with the exception of Orussidae, phytophagous in the larval stage. The caterpillar-like larvae are often confused with those of Lepidoptera, and some of the damage to plants may be attributed to Lepidoptera by the untrained observer. Larvae of a number of sawfly species can cause economic damage in forests, agricultural crops, and ornamental plants. Adults are short-lived and are less conspicuous and usually less commonly collected than larvae.

No modern comprehensive state list of sawflies exists and no other state has been so thoroughly sampled for sawflies as Virginia. Without other state lists, comparisons of numbers cannot be made, but simply the 345 species recorded herein represent about one-third of the known fauna of America north of Mexico (Smith, 1979a). Older state lists exist, but the nomenclature is so outdated that it is nearly impossible to accurately compare numbers. For the record, with approximate numbers of species and subspecies in parentheses, previous state lists include Colorado (85) (Ashmead, 1890), New Jersey (400) (MacGillivray, 1910), Connecticut (196) (MacGillivray, 1916), New York (445) (Bradley, 1928), and North Carolina (128)

(Brimley, 1938) with approximately 30 additions by Ahlstrom (1995). Smith & Barrows (1987) recorded 117 species from urban environments in the Washington, DC, area.

This list is intended as a precursor for a comprehensive taxonomic treatment of the sawflies of Virginia and neighboring states. Additional material and collections to examine are welcome.

MATERIALS AND METHODS

Most of the records are from my collecting efforts over the past 25 or more years; other records are from the collections at VPI&SU, Blacksburg, VA; the National Museum of Natural History, Smithsonian Institution, Washington, DC (USNM); and a few from collections of other institutions (see acknowledgments). I have examined over 100,000 specimens for this study.

Sawfly sampling is most efficiently done with Malaise traps, and most records from the following counties are from sites where Malaise traps were used in several consecutive years. These localities are as follows (see Fig. 1):

Augusta Co., Deerfield Ranger District, George Washington National Forest, centered at 38° 07' 30" N, 79° 22' 30" W, with traps set at elevations of 561-744 m along the southeast slope of Great North Mountain.

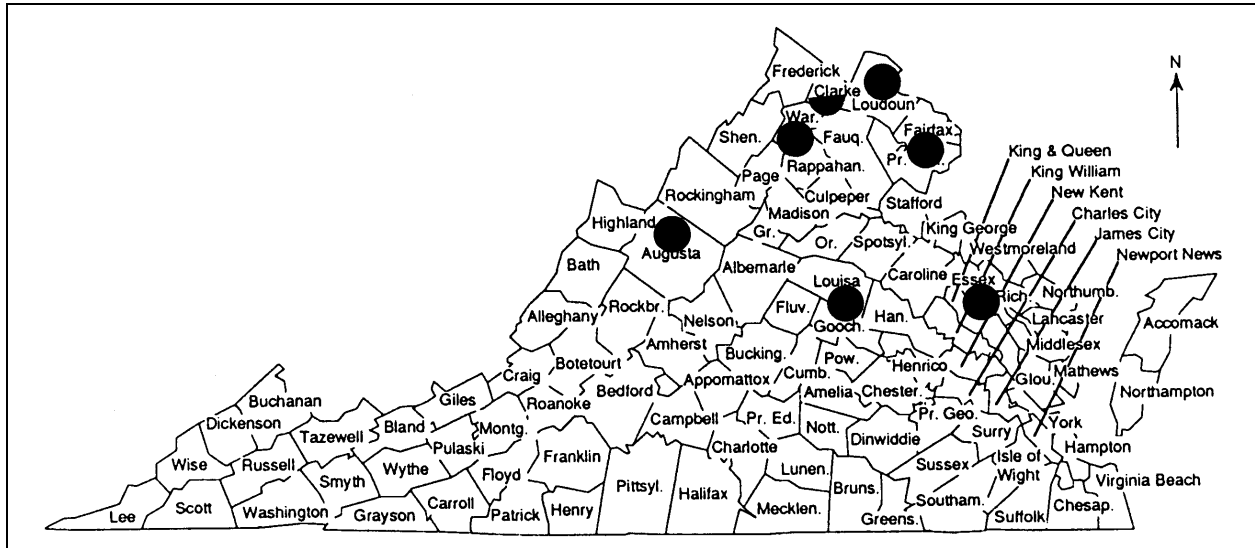


Fig. 1. Counties in Virginia. Dots indicate intensive sampling sites mentioned in Materials and Methods.

Five years collecting, 1995-1999, 20 traps per year, in mixed oak-pine forests. See studies by Braud et al. (2003) and Strazanac et al. (2003).

Clarke Co., University of Virginia Blandly Experimental Farm and State Arboretum of Virginia, 3 km [≈ 2 mi] on labels] S Boyce, $39^{\circ} 52' N$, $78^{\circ} 10' W$. Six years collecting, 1990-1996, with 10-15 traps per year. Over 600 acres ($\sim 1,300$ ha) of various habitats, such as ponds, willow, and oak-hickory stands, and a large selection of trees and shrubs in the Arboretum.

Essex Co., 1.6 km [≈ 1 mi] on labels] SE Dunnsville, $37^{\circ} 52' N$, $76^{\circ} 48' W$. Nine years collecting, 1991-1999, with 15-20 traps each year. About a 100 acre (~ 250 ha) site of mixed hardwoods and pine, sandy soil, in the Coastal Plain.

Fairfax Co., near Annandale, $38^{\circ} 50' N$, $77^{\circ} 12' W$. Twenty-six years collecting, 1981-2006, with one trap each year in the backyard of a suburban development.

Loudoun Co., near jct. of Sycolin Road and Goose Creek. Two years collecting, 1998-1999, with five traps each year. Floodplain area with mixed vegetation near Goose Creek.

Louisa Co., 6 km [≈ 4 mi] on labels] S Cuckoo. Five years collecting, 1985-1989, with 10-15 traps each year set up on a 560 acre ($\sim 1,200$ ha) site; oak, hickory, mixed pine, rolling hills, stream drainages, interspersed among grazing pastures.

Warren Co., near Linden. Two years collecting, 1993-1994, one trap in streambed.

Most specimens from the above collections are deposited in the USNM. Specimens from the Augusta County study are in the insect collection of West Virginia University, Morgantown, with representatives

in the USNM.

The traps at each site were set up in March or April and taken down in September or October, thus allowing continual sampling through the season. Collections were made and preserved in 95% ethyl alcohol and traps were serviced every two or three weeks, depending on the time of the season and the weather. Various habitats were sampled within each site.

The list is arranged by family (and by subfamily in the Tenthredinidae) according to Smith (1979a). The scientific name is followed by the common name, if any; counties from which I have examined specimens; note if an introduced species; recorded host plants (most are from Smith 1979a and most are recorded only by host-plant genus); and references or other miscellaneous notes. References are mostly restricted to studies in Virginia and general literature that may help in identification. Other references may be found in Smith (1979a).

RESULTS

Most records are from the collection sites listed above. Many species are probably common throughout the state, such as some found on cultivated roses, oaks, and other widespread plants. Because of its proximity, northern Virginia is the best sampled area in this study, and with my field work in the Coastal Plain (Essex County), Piedmont (Fairfax and Louisa counties), and Shenandoah Valley (Clarke County), and studies by Braud et al. (2003) and Strazanac et al. (2003) in the Appalachians (Augusta County), I have obtained samples from a good cross-section of the state. Species

richness increases inland. In nine years of collecting in Essex County, I obtained about 170 species; in five years in Louisa and six years in Clarke counties, about 200 species at each site. However, the approximately 110 species collected in Augusta County are low because the traps were set within the forest. About 120 species have been taken over 26 years in a backyard trap in a suburban habitat in Fairfax County.

The following checklist presents records for 345 species I have examined, plus 23 species which I believe eventually will be found in the state. The list is not exhaustive and additional species are expected, most likely from parts of the state that have not been well sampled. More collections are needed in the higher elevations of the Appalachians and in southern and southwestern Virginia. There are some species that have been found in the Northeast, e.g., New York, Pennsylvania, higher elevations of West Virginia, and the mountains of Tennessee and North Carolina, for which there are no Virginia records. Certainly, some of these eventually will be found in Virginia.

Keys to genera of certain families or subfamilies are in references to revisions given under those taxa. The most comprehensive keys to families and genera are by Goulet (1992, 1993). Ross (1937) is still helpful for family, subfamily, and some generic identifications.

XYELIDAE

Xyela larvae feed in the staminate cones of pines, *Pinus* spp., except *X. gallicaulis* which is a shoot borer. Species of *Xyela* are the earliest sawflies to fly in the spring; my earliest collection date is February 17 in Fairfax County. *Megaxyela* and *Macroxyela* larvae are external leaf feeders; adults are rarely collected. See Burdick (1961) for identification of *Xyela* and Smith & Schiff (1998) for *Macroxyela* and *Megaxyela*.

Macroxyela ferruginea (Say).

Clarke, Fairfax, Montgomery. Host: *Ulmus*. Adults swept from elms, *Ulmus* spp., in the Arboretum during the first half of April.

Megaxyela bicoloripes (Rohwer).
Arlington.

Megaxyela major (Cresson).

Arlington (identity uncertain, based on larvae). Host: Larvae "on hickory."

Xyela alpigena (Strobl).

Augusta, Botetourt, Clarke, Fairfax. Host: *Pinus*.

Xyela bakeri Konow.

Essex, Fairfax, King William, Nelson. Host: *Pinus*.

Xyela gallicaulis Smith.

King and Queen. Host: *Pinus* (Smith, 1970).

Xyela minor Norton.

Arlington, Botetourt, Essex, Fairfax, Fauquier, King and Queen, King William, Louisa, New Kent, Stafford. Host: *Pinus*.

Xyela obscura (Strobl).

Arlington, Clarke, Essex, Fairfax, Fauquier, Henry, King and Queen, King William, Louisa, Montgomery, New Kent, Stafford. Host: *Pinus*.

*Xyela styra*x Burdick.

Arlington, Essex, Fairfax. Host: *Pinus*.

PAMPHILIIDAE

Larvae of *Acantholyda*, *Cephalcia*, and *Neurotoma* are gregarious and live and feed in webs of their own making on their host plant. Larvae of *Onycholyda* and *Pamphilius* are leaf rollers. See Middlekauff (1958, 1964) for revisions of this family; species currently placed in the genus *Onycholyda* were treated by Middlekauff (1964) as *Pamphilius* in couplets 1-10 and 15-31 of his key.

Acantholyda angulata (MacGillivray).

Essex. Host: *Pinus*.

Acantholyda atripes (Cresson).

Henrico. Host: *Pinus taeda* L.

Acantholyda bicolorata (Norton).

Essex.

Acantholyda circumcincta (Klug).

Essex. Host: *Pinus*.

Acantholyda maculiventris (Norton).

Clarke. Hosts: *Abies*, *Picea*, *Pinus*.

Acantholyda marginiventris (Cresson).

Fairfax, Montgomery.

Acantholyda ochrocera (Norton).

Clarke.

Acantholyda pini Rohwer.

Fairfax, Nottoway.

Acantholyda tessellata (Klug).
Essex, Fauquier. Host: *Pinus*.

Acantholyda zappei (Rohwer).
Augusta, Essex, City of Lynchburg. Host: *Pinus*.

Cephalcia marginata Middlekauff.
"Va." Host: *Pinus*.

Neurotoma fasciata (Norton).
Arlington, Augusta, Essex, Fairfax, Louisa.
Host: *Prunus*.

Neurotoma inconspicua (Norton).
Plum web-spinning sawfly. Clarke. Host: *Prunus*.

Neurotoma willi Middlekauff.
Rockingham. Host: *Crataegus* (?).

Onycholyda amplecta (Fabricius).
Albemarle, Arlington, Clarke, Essex, Fairfax, Loudoun,
Louisa, Rockingham, Shenandoah, City of Suffolk.
Host: *Rubus*.

Onycholyda excavata (Norton).
Arlington, Essex, Loudoun, Louisa, Montgomery.
Host: *Cornus*.

Onycholyda luteicornis (Norton).
Arlington, Augusta, Clarke, Essex, Fairfax, Highland,
Loudoun, Louisa, Montgomery, Rockingham, Warren.
Host: *Rubus*.

Onycholyda multisignata (Norton).
Montgomery.

Onycholyda quebecensis (Provancher).
Augusta, Clarke, Essex, Fairfax, Louisa, Warren.

Onycholyda rufofasciata (Norton).
Clarke, Essex, Fairfax, Loudoun, Louisa, Smyth,
Warren.

Pamphilius burquei (Provancher).
Giles.

Pamphilius greenei Rohwer.
Essex.

Pamphilius middlekauffi Shinohara & Smith.
Arlington, Augusta, Essex, Fairfax, Fauquier, Loudoun,
Louisa. Host: *Corylus*.

Pamphilius ochreipes (Cresson).
Arlington, Augusta, Clarke, Essex, Fairfax, Louisa.
Host: *Viburnum*.

Pamphilius ocreatus (Say).
Clarke, Essex, Louisa.

Pamphilius pallimaculus (Norton).
Augusta, Clarke, Essex, Giles. Host: Adults collected
from *Rosa*.

Pamphilius persicum MacGillivray.
Essex, Loudoun, Louisa. Host: *Prunus*.

Pamphilius phyllisae Middlekauff.
Clarke, Culpeper, Essex, Fairfax, Giles, Loudoun,
Warren. Host: *Quercus*.

Pamphilius pullatus (Cresson).
Clarke, Fairfax, Rockingham. Host: *Viburnum*.

Pamphilius rileyi (Cresson).
Augusta, Fairfax, Warren. Host: *Amelanchier*.

Pamphilius semicinctus (Norton).
Essex, Fairfax. Hosts: *Amelanchier*, *Pyrus*, *Prunus*.

PERGIDAE

All larvae are external leaf feeders, feeding and skeletonizing the leaf from the underside. The genus needs study. *Acordulecera dorsalis* is a complex of color forms and probably several species are masquerading under this name. There are two or three additional species which are not recorded below. The following list (as given by Smith, 1979a) will have to suffice until taxonomic problems are resolved.

Acordulecera dorsalis Say.
Augusta, Clarke, Essex, Fairfax, Franklin, Loudoun,
Louisa, Montgomery, Warren. Hosts: *Castanea*, *Carya*,
Juglans, *Quercus*.

Acordulecera maculata MacGillivray.
Augusta, Clarke, Essex, Fairfax, Loudoun, Louisa.

Acordulecera mellina MacGillivray.
Augusta, Essex, Fairfax, Loudoun.

Acordulecera pellucida (Konow).
Augusta, Clarke, Essex, Fairfax, Loudoun,
Montgomery, Warren.

ARGIDAE

All except *Schizocerella pilicornis* are external leaf feeders; *S. pilicornis* larvae mine leaves of *Portulaca*. Smith (1969d, 1971b, 1989) treated the North American Argidae.

Arge abdominalis (Leach).
Essex, Loudoun, Louisa. Host: *Rhododendron canescens* (Michx.) Sweet.

Arge azaleae Smith.
Skyline Drive [Shenandoah National Park]. Host: *Rhododendron vicosum* (L.) Torr., *Rhododendron* sp.

Arge cerulea (Norton).
Essex, Fairfax, Loudoun.

Arge coccinea (Fabricius).
Arlington, Essex, Fairfax, New Kent, City of Norfolk, Prince William, City of Virginia Beach. Hosts: *Rhus copallinum* L., *R. glabra* L., *Rhus* sp.

Arge cyra (Kirby).
Fairfax. Hosts: *Betula*, *Salix*.

Arge humeralis (Beauvois).
Accomack, Arlington, City of Chesapeake, Clarke, Essex, Fairfax, Fauquier, Giles, City of Hampton, Louisa, Madison, Montgomery, Nelson, New Kent, City of Norfolk, Northampton, Page, Prince William. Hosts: *Toxicodendron pubescens* P. Mill., *T. radicans* (L.) Kuntze, *T. vernix* (L.) Kuntze.

Arge macleayi (Leach).
Arlington, Augusta, Clarke, Fairfax, Grayson, Highland, Louisa, Page. Hosts: *Amelanchier*, *Prunus*, *Sorbus*.

Arge onerosa (MacGillivray).
Fairfax. Host: *Salix*.

Arge pectoralis (Leach). Birch sawfly.
Arlington, Augusta, Clarke, Essex, Fairfax, Louisa, Nelson, Page, Prince William. Hosts: *Alnus*, *Betula*, *Corylus*.

Arge quidia Smith.
Augusta, Essex, Fairfax, Giles, Montgomery, Prince William, Warren. Host: *Quercus*.

Arge salicis Rohwer.
Arlington, Fairfax. Host: *Salix*.

Arge scapularis (Klug).
Amherst, Clarke, Fairfax, Giles, Louisa, Nelson, City of Richmond, Warren. Host: *Ulmus*.

Arge willi Smith.
Augusta, Essex, Fairfax, Louisa, Prince William, Wythe. Host: *Corylus*.

Atomacera debilis Say.
Arlington, Clarke, Essex, Fairfax, Louisa, Nelson, Page, Rockingham, Shenandoah. Hosts: *Desmodium*, *Lespedeza*.

Atomacera decepta Rohwer.
Clarke, Essex, Fairfax, Greene, Louisa, Montgomery, Prince William, Washington. Hosts: Common on some ornamental hibiscus: hardy herbaceous hibiscus, scarlet rose, crimson-eyed rose mallow, confederate rose (*Hibiscus mutabilis* L.), *Hibiscus moscheutos* L. cultivars (Boyd, 2005).

Schizocerella lineata (Rohwer).
Fairfax. Host: *Portulaca oleraceae* L. An external feeder.

Schizocerella pilicornis (Holmgren). Purslane sawfly.
Arlington, Augusta, Clarke, Essex, Fairfax, Louisa, Montgomery, Page, Westmoreland. Host: *Portulaca oleraceae* L. A leafminer.

Sphacophilus cellularis (Say).
Augusta, Clarke, Essex, Fairfax, King George, Loudoun, Louisa, City of Norfolk, Northampton, City of Virginia Beach, Westmoreland. Hosts: *Ipomoea*, *Convolvulus*. See Chapman & Gould (1929).

Sterictiphora cruenta Smith.
Essex. Host: *Prunus*.

Sterictiphora sericea (Norton).
Clarke, Essex, Louisa.

Sterictiphora serotina Smith.
Augusta, Clarke, Essex, Fairfax, Louisa, Page. Host: *Prunus serotina*.

Sterictiphora transversa Smith.
Clarke, Louisa.

CIMBICIDAE

All larvae are external leaf feeders. The species of *Cimbex* and *Trichiosoma* are seldom collected in the state.

Abia lonicerae (Linnaeus).
Clarke, Essex, Fairfax, Halifax, Loudoun, Louisa, Montgomery, Patrick, Roanoke, Stafford, Warren, Wise. Host: *Lonicera*. In previous literature as *Zaraea lonicerae* (Smith, 1979a). An introduced species.

Cimbex americana Leach. Elm sawfly.
Bath, Fairfax, Giles, Highland, Montgomery, Rockbridge, Shenandoah. Hosts: *Acer*, *Alnus*, *Betula*, *Malus*, *Populus*, *Prunus*, *Salix*, *Ulmus*.

Trichiosoma triangulum Kirby.
Montgomery, Roanoke, Smyth. Host: *Alnus*.

DIPRIONIDAE

All species feed on foliage of conifers and some can cause serious damage during outbreaks. Some are destructive on ornamentals. *Abies*- and *Tsuga*-feeding species eventually may be found at higher elevations. The treatment of *Neodiprion* by Ross (1955) is helpful for identification.

Diprion similis (Hartig). Introduced pine sawfly.
Fairfax, Grayson, Smyth, Washington, Wythe. Host: *Pinus strobus* L. See Thomas et al. (1982) for southwestern counties. An introduced species.

Monoctenus melliceps (Cresson).
Clarke, Essex, Louisa. Host: *Juniperus*.

Neodiprion abbotii (Leach).
Clarke, Essex, Fairfax, Louisa, Powhatan, Prince Edward. Hosts: *Pinus taeda* L. probably preferred; also, *P. echinata* Mill., *P. palustris* Mill., *P. resinosa* Ait. See Hetrick (1956).

Neodiprion compar (Leach).
Essex, Fairfax, King and Queen, City of Norfolk, Patrick. Hosts: *Pinus banksiana* Lamb., *P. resinosa* Ait.

Neodiprion excitans Rohwer.
Blackheaded pine sawfly. King and Queen. Hosts: *Pinus echinata* Mill., *P. elliotii* Engelm., *P. rigida* Mill., *P. serotina* Michx., *P. taeda* L. See Hetrick

(1956).

Neodiprion hetricki Ross.
Caroline, Essex, Mathews. Host: *Pinus taeda* L. See Hetrick (1956).

Neodiprion lecontei (Fitch). Redheaded pine sawfly.
Albemarle, Augusta, Bedford, City of Chesapeake, Essex, Fairfax, James City, New Kent, Prince Edward, Richmond. Host: *Pinus*; various pines. Especially common on ornamentals.

Neodiprion nannulus nannulus Schedl.
Wise. Host: *Pinus virginiana* Mill.

Neodiprion pinetum (Norton). White pine sawfly.
Fluvanna, Rappahannock, City of Staunton. Host: *Pinus strobus* L.

Neodiprion pratti prattii (Dyar). Virginia pine sawfly.
Albemarle, Buckingham, Culpeper, Cumberland, Fairfax, Gloucester, Halifax, King and Queen, Louisa, Mecklenburg, Middlesex, Nelson, Prince Edward. Hosts: *Pinus echinata* Mill., *P. palustris* Mill., *P. resinosa* Ait., *P. taeda* L., *P. virginiana* Mill. See Hetrick (1956), Morris et al. (1963), and Bobb (1963, 1965) for reports of extensive outbreaks in the 1950s and early 1960s.

Neodiprion taedae taedae Ross.
Spotted loblolly pine sawfly. Accomack, Essex, King and Queen, King William, Mathews, Middlesex. Host: *Pinus taeda* L. See Hetrick (1941, 1956).

Neodiprion virginiana Rohwer.
Caroline, Fairfax. Host: *Pinus taeda* L.

TENTHREDINIDAE

Selandriinae

Most species are associated with ferns, with one on moss. The grass- or sedge-feeding species have not been found in Virginia. Smith (1969c) revised this subfamily for North America.

Aneugmenus flavipes (Norton).
Arlington, Augusta, Clarke, Essex, Fairfax, Giles, Grayson, Louisa, City of Norfolk, Page, Wythe. Hosts: *Pteridium aquilinum* (L.) Kuhn and probably other ferns.

- Hemitaxonus albidipictus* (Norton).
Arlington, Augusta, Bedford, Clarke, Essex, Fairfax,
Louisa, Warren. Hosts: ferns.
- Hemitaxonus dubitatus* (Norton).
Arlington, Clarke, Essex, Fairfax, Louisa, Page. Host:
Onoclea sensibilis L. Common on this fern in gardens.
- Heptamelus ochroleucus* (Stephens).
Fairfax. Introduced (Smith, 2003). Hosts: In Europe,
Athyrium, *Blechnum*, *Polypodium*. Larvae bore in
stems.
- Nesoselandria morio* (Fabricius).
Fairfax. Introduced (Smith, 2003). Host: moss.
- Strongylogaster impressata* Provancher.
Clarke, Essex, Fairfax, Louisa, Page, Warren. Hosts:
ferns.
- Strongylogaster multincta* Norton.
Arlington, Augusta, Essex, Montgomery. Host:
Pteridium aquilinum (L.) Kuhn.
- Strongylogaster polita* Cresson.
Augusta, Essex, Louisa, Page.
- Strongylogaster remota* Rohwer.
Warren.
- Strongylogaster soriculatipes* Cresson.
Augusta, Loudoun, Warren. Hosts: ferns.
- Strongylogaster tacita* (Norton).
Arlington, Essex, Fairfax, Giles, Highland, Louisa,
Tazewell. Hosts: ferns. Adults taken from *Pteridium*
aquilinum (L.) Kuhn. and *Osmunda regalis* L. (Goulet,
pers. comm.).
- Dolerus apricus* (Norton).
Arlington, Charlotte, Clarke, Fairfax, Fauquier,
Montgomery. Host: *Equisetum*.
- Dolerus aprilis* (Norton).
Bland, Craig, Fairfax, City of Hampton, Montgomery,
York.
- Dolerus bicolor* (Beauvois).
Essex, Loudoun, Louisa, Montgomery.
- Dolerus centralis* Ross.
Clarke, Fairfax, Louisa.
- Dolerus hebes* Goulet.
Augusta, Clarke, Essex, Louisa.
- Dolerus kennedyi* Ross.
Louisa.
- Dolerus klokeorum* Goulet & Smith.
Essex, Fairfax, Louisa.
- Dolerus neoagcistus* MacGillivray.
Arlington, Bedford, Clarke, Essex, Fairfax, Loudoun,
Louisa, Montgomery, Pulaski, Rockingham, Stafford.
- Dolerus neocollaris* MacGillivray.
Clarke.
- Dolerus neosericeus* MacGillivray.
Grayson.
- Dolerus nitens* Zaddach.
Bedford, Clarke, Fairfax, Giles, Loudoun,
Montgomery, Warren. Introduced. Hosts: grasses. A
common, early sawfly in northern Virginia. None were
collected in Essex and Louisa counties from 1985
through 1999.

Dolerinae

Larvae of most species feed on grasses, including grain crops; several are on *Equisetum*. Goulet (1986) revised this group for North America, treating it as a tribe of the Selandriinae.

- Dolerus abdominalis* (Norton).
Louisa.
- Dolerus agcistus* MacGillivray.
Clarke.
- Dolerus alutaceus* Goulet.
Rockingham.
- Dolerus nortoni* Ross.
Clarke, Fairfax.
- Dolerus polysericeus* MacGillivray.
Giles.
- Dolerus sericeus* Say.
Clarke, Louisa, Montgomery. Host: wheat.
- Dolerus subfasciatus* Smith.
Clarke, Montgomery.
- Dolerus tibialis conjugatus* MacGillivray.
Charlotte, Craig, Fairfax, Giles, Montgomery,

Rockingham, Washington. Host: *Equisetum*.

Dolerus unicolor (Beauvois).

Augusta, Bedford, Clarke, Craig, Fairfax, Fauquier, Louisa, Montgomery, Pulaski, Rockingham, Tazewell, Wythe. Hosts: grasses.

Dolerus versus Norton.

Clarke, Essex, Fairfax, Louisa, City of Richmond.

Nematinae

Most species are external leaf feeders. Larvae of *Euura* form stem galls on willow, *Pontania* form leaf galls on willow, *Phyllocolpa* form leaf rolls on poplar and willow, *Pseudodineura parva* is a leaf miner, larvae of *Caulocampus* are petiole miners, and larvae of *Hoplocampa* live and feed in developing fruits of their hosts. Several genera are relatively unstudied, and a complete listing cannot be given until taxonomic problems are resolved. These include *Amauronematus*, *Euura*, *Nematus*, *Pachynematus*, *Phyllocolpa*, and *Pontania*. Studies on these genera could increase this list by 20 or more species. Literature that may be helpful for species identification of some genera is as follows: *Caulocampus* (Smith, 1968); Cladiini (*Cladius*, *Priophorus*) (Smith, 1974); *Craesus* (Smith, 1972); *Craterocercus* (Smith, 1969a); *Hemichroa* (Smith, 1975b); *Hoplocampa* (Ross, 1943b); *Nepionema* (Smith, 1994a); *Pachynematus* (Ross, 1945); and *Pseudodineura* (Smith, 1976).

Adelomos cleone Ross.

Tazewell.

Amauronematus amentorum (Foerster).

Fairfax. Host: *Salix*.

Amauronematus brunneus (Norton).

Clarke.

Amauronematus nr. *lineatus* (Harrington).

Clarke.

Amauronematus orbitalis Marlatt.

Clarke, Fairfax, Louisa.

Caulocampus matthewsi Smith.

Giles.

Cladius difformis (Panzer). Bristly roseslug.

Albemarle, Arlington, Clarke, Fairfax, Loudoun, Montgomery, Rockingham. Host: *Rosa*. A common pest of cultivated roses.

Craesus castaneae Rohwer.

Fairfax, Franklin. Host: *Castanea*.

Craesus latitarsus Norton. Dusky birch sawfly.

Louisa. Host: *Betula*.

Craterocercus fraternalis (Norton).

Augusta, Clarke, Essex, Fairfax, Giles, Louisa, Montgomery, Rockingham, Warren. Host: *Quercus*.

Craterocercus furcatus Smith.

Clarke, Essex, Montgomery.

Craterocercus obtusus (Klug).

Augusta, Essex, Giles, Louisa, Rockingham. Host: *Quercus*.

Euura salicicola Smith ?.

Clarke, Fairfax. Host: *Salix*. The species identity is questionable.

Hemichroa militaris (Cresson).

Clarke, Giles, Grayson, Montgomery, Page, Washington. Hosts: *Amelanchier*, *Prunus*.

Hoplocampa halcyon (Norton).

Essex, Fairfax, Franklin. Host: *Amelanchier*.

Hoplocampa marlatti Rohwer.

Arlington, Augusta, Clarke, Essex, Fairfax, Louisa. Host: probably *Prunus*.

Nematus abbotii (Kirby).

Augusta, Clarke, Essex, Fairfax, Loudoun, Warren. Host: *Robinia*.

Nematus nr. *atriceps* (Marlatt).

Augusta.

Nematus attus Smith.

Montgomery. Host: *Populus*.

Nematus carpini (Marlatt).

Bedford, Fairfax, Louisa, Patrick. Host: *Carpinus*.

Nematus corylus Cresson.

Clarke, Essex, Fairfax, Louisa, Warren. Host: *Corylus*.

Nematus erythrogaster Norton.

Arlington, City of Chesapeake, Clarke, Essex, Fairfax, Louisa. Host: *Alnus*.

Nematus hudsoniimagnus Dyar.

Clarke, Louisa, Rockingham. Host: *Populus*.

- Nematus laticulus* (Norton).
Clarke, Essex, Fairfax, Frederick, Montgomery, Orange.
Loudoun, Louisa, Montgomery, City of Richmond, Rockingham, Warren. Hosts: *Carex* and possibly grasses.
- Nematus latifasciatus* Cresson.
Grayson. Host: *Betula*.
Pachynematus extensicornis (Norton). Grass sawfly.
Augusta, Clarke, Essex, Loudoun, Montgomery. Hosts: wheat, probably other grasses.
- Nematus limbatus* Cresson.
Clarke. Hosts: *Salix*, *Populus*.
Phyllocolpa nigrita (Marlatt).
"Virginia."
- Nematus lipovskyi* Smith.
Augusta, Clarke, Essex, Fairfax, Louisa, Loudoun.
Host: *Rhododendron*.
Phyllocolpa populi (Marlatt) (?).
Clarke.
- Nematus oligospilus* Foerster.
Arlington, Charlotte, Clarke, Fairfax, Louisa, Montgomery, City of Suffolk. Host: *Salix*.
Pontania gracilis Marlatt.
"Va." Host: *Salix*.
- Nematus ostryae* (Marlatt).
Augusta, Giles, Fairfax, Fauquier. Host: *Ostrya*.
Priophorus morio (Lepeletier).
Clarke. Host: *Rubus*.
- Nematus radialis* Smith.
Augusta, Clarke.
Priophorus pallipes (Lepeletier).
Arlington, Augusta, Clarke, Essex, Fairfax, Louisa, Washington. Hosts: *Alnus*, *Crataegus*, *Prunus*.
- Nematus ribesii* (Scopoli). Imported currantworm.
Clarke, Fairfax. Host: *Ribes*.
Pristiphora abbreviata (Hartig). California pear sawfly.
Clarke, Fairfax, Fauquier, Louisa, Rockingham.
Introduced. Host: *Pyrus*.
- Nematus salicisodoratus* Dyar.
Clarke, Essex, Fairfax, Louisa, Montgomery. Hosts: *Populus*, *Salix*.
Pristiphora acidovalva Wong.
Clarke, Fairfax, Louisa. Host: *Salix*.
- Nematus superbus* (Provancher).
Fairfax, Highland, Rockbridge.
Pristiphora appendiculata (Hartig).
Clarke, Essex, Fairfax, Giles, Louisa, Page, Warren.
Host: *Ribes*. In previous literature as *Pristiphora rufipes* Lepeletier.
- Nematus tibialis* Newman.
Accomack, Arlington, Augusta, Clarke, Essex, Fairfax, Fauquier, King and Queen, King William, Loudoun, Louisa, Montgomery, Page, Patrick, Rockingham, Shenandoah, Warren. Host: *Robinia pseudoacacia* L.
Pristiphora banksi Marlatt.
Accomack, Augusta, Clarke, Essex, Fairfax, Giles, Loudoun, Louisa, City of Suffolk, City of Virginia Beach, Warren. Host: *Vaccinium*.
- Nematus ventralis* Say. Willow sawfly.
Arlington, Clarke, Fairfax, Montgomery, City of Richmond. Host: *Salix*.
Pristiphora bivittata (Norton).
Augusta, Clarke, Fairfax, Loudoun, Montgomery, Rockingham, Warren. Host: *Spiraea*.
- Neopareophora litura* (Klug).
Arlington, Augusta, Clarke, Essex, Fairfax, Louisa, Montgomery, Page, Warren. Host: *Vaccinium*.
Pristiphora chlorea (Norton).
Augusta, Clarke, Essex, Fairfax, Fauquier, Loudoun, Louisa, Montgomery, Roanoke, Warren. Host: *Quercus*.
- Nepionema appalachiana* Smith.
Essex.
Pristiphora cincta Newman.
Augusta, Clarke, Essex, Fairfax, Giles, Grayson, Louisa, Smyth. Hosts: *Betula*, *Salix*, *Vaccinium*.
- Pachynematus corniger* (Norton).
Arlington, Augusta, Clarke, Essex, Fairfax, Giles,

Pristiphora erichsonii (Hartig). Larch sawfly.
Montgomery. An introduced species. Host: *Larix*.

Pristiphora geniculata (Hartig). Mountain ash sawfly.
Grayson. Host: *Sorbus*.

Pristiphora mollis (Hartig).
Clarke, Louisa, Warren. Host: *Vaccinium*.

Pristiphora paloma Wong & Ross.
Clarke, Fairfax.

Pristiphora siskiyouensis Marlatt.
Essex, Fairfax, Halifax, Louisa. Hosts: *Alnus*, *Betula*.

Pristiphora sycophanta Walsh.
Arlington, Clarke, Craig, Fairfax, Essex, Louisa. Host:
Salix.

Pristiphora zella Rohwer.
Augusta, Clarke, Fairfax, Giles, Louisa, Warren.

Pseudodineura parva (Norton).
Clarke, Essex, Louisa. Host: *Hepatica*.

Heterarthrinae

Larvae of *Caliroa* and *Endelomyia* are external leaf feeders. *Caliroa cerasi* may be a pest in orchards and *E. aethiops* a pest of cultivated roses. Species of the remaining genera are leaf miners in their host plants. Smith (1971a) revised this subfamily for North America.

Caliroa cerasi (Linnaeus). Pear sawfly.
Arlington, Fairfax. Hosts: *Pyrus*, *Prunus*, *Crataegus*,
and probably other Rosaceae.

Caliroa fasciata (Norton).
Clarke, Essex, Fairfax, Louisa. Host: *Quercus*.

Caliroa liturata MacGillivray.
Fairfax, City of Suffolk. Host: *Prunus*.

Caliroa lobata MacGillivray.
Augusta, Clarke, Fairfax, Essex, Louisa. Host: *Quercus*.

Caliroa lorata MacGillivray.
Arlington, Clarke, Fairfax, Louisa. Host: *Castanea*.

Caliroa lunata MacGillivray.
Arlington, Augusta, Clarke, Essex, Fairfax, Louisa,
Warren.

Caliroa nyssae Smith.
Essex, Fairfax, Louisa. Host: *Nyssa sylvatica* Marsh.

Caliroa obsoleta (Norton).
Arlington, Clarke, Essex, Fairfax, Louisa. Host:
Quercus.

Caliroa petiolata Smith.
Arlington, Caroline, Clarke, Essex, Louisa. Host:
Quercus.

Caliroa quercuscoccinea (Dyar). Scarlet oak sawfly.
Augusta, Clarke, Essex, Fairfax, Mecklenburg,
Washington. Host: *Quercus*.

Endelomyia aethiops (Fabricius). Roseslug.
Albemarle, Arlington, Clarke, Fairfax, Henrico,
Loudoun, Montgomery, Rockingham. Host: *Rosa*,
common on cultivated roses.

Kaliofenusa ulmi (Sundevall). Elm leafminer.
Clarke. Introduced. Host: *Ulmus*. See Smith (1995) for
discovery in Virginia.

Metallus ochreus Smith.
Essex, Fairfax, Loudoun, Louisa.

Metallus rohweri MacGillivray.
Arlington, Clarke, Essex, Fairfax, Loudoun, Louisa,
Page. Host: *Rubus*.

Nefusa ambigua (Norton).
Augusta, Clarke, Fairfax, Loudoun, Montgomery, Page.
Host: *Viola*.

Profenusa alumna (MacGillivray).
Augusta, Clarke, Fairfax. Host: *Quercus*.

Profenusa canadensis (Marlatt).
Clarke, Page. Host: *Crataegus*.

Blennocampinae

All larvae are external leaf feeders except those of *Ardis brunniventris* which is a shoot borer in roses. Smith (1969b) revised this subfamily for North America.

Ardis brunniventris (Hartig).
Clarke, Essex, Louisa, Page. Host: *Rosa*.

Erythraspides carbonarius (Cresson).
Arlington, Clarke, Fairfax, Loudoun, Montgomery,
Warren. Host: *Oenothera*.

- Erythraspides vitis* (Harris). Grape sawfly.
Albemarle, Augusta, Chesterfield, Clarke, Essex,
Fairfax, Loudoun, Louisa, Smyth, Rockingham.
Host: *Vitis*.
- Eupareophora parca* (Cresson).
Clarke, Essex, Fairfax, Henry, Loudoun, Louisa,
Warren. Host: *Fraxinus*.
- Eutomostethus ephippium* (Panzer).
Arlington, Augusta, Clarke, Craig, Fairfax, Loudoun,
Warren. Introduced. Hosts: *Poa*, possibly Graminae.
- Eutomostethus luteiventris* (Klug).
Clarke, Fairfax, Montgomery, Page. Introduced. Host:
Juncus.
- Halidamia affinis* (Fallén).
Clarke, Essex, Fairfax, Loudoun, Louisa, Montgomery,
Northampton, Page, Warren. Introduced. Host: *Galium*.
- Monophadnoides conspiculatus* MacGillivray.
Arlington, Augusta, City of Chesapeake, Clarke, Essex,
Fairfax, Loudoun, Louisa.
- Monophadnoides pauper* (Provancher).
Augusta, Clarke, Essex, Fairfax, Giles, Louisa, Page,
Warren.
- Monophadnoides rubi* (Harris). Raspberry sawfly.
Augusta, City of Chesapeake, Clarke, Essex, Fairfax,
Loudoun, Louisa, Montgomery, Page, Warren.
Host: *Rubus*. In previous literature as *Monophadnoides*
geniculatus (Hartig) (Smith, 1979a).
- Monophadnus aequalis* MacGillivray.
Augusta, Clarke, Essex, Fairfax, Loudoun, Louisa,
Page. Host: probably *Ranunculus*.
- Monophadnus bakeri* Smith.
Fairfax, Loudoun.
- Monophadnus pallescens* (Gmelin).
Clarke, Essex. Host: *Ranunculus*.
- Paracharactus niger* (Harrington).
Clarke, Loudoun, Louisa, Page. Host: probably sedges
(*Carex*).
- Paracharactus rudis* (Norton).
Arlington, Augusta, Clarke, Essex, Fairfax, Loudoun,
Louisa, Page, Warren.
- Periclista albicollis* (Norton).
Augusta, Clarke, Essex, Fairfax, Fauquier, Giles,
Loudoun, Louisa, Page, Prince William, Rockingham,
Warren. Host: *Quercus*.
- Periclista bipartita* (Cresson).
Louisa.
- Periclista diluta* (Cresson).
Augusta, Clarke, Essex, Giles, Loudoun, Louisa,
Montgomery, Warren. Host: *Quercus*.
- Periclista inaequidens* (Norton).
Arlington, Essex, Page, Rockingham. Host: *Quercus*.
- Periclista marginicollis* (Norton).
Arlington, Augusta, Clarke, Essex, Loudoun,
Louisa, Montgomery, Page, Rockingham, Warren.
Host: *Carya*.
- Periclista media* (Norton).
Augusta, Essex, Fairfax, Rockingham, Warren. Host:
Quercus.
- Periclista subtruncata* Dyar.
Essex, Fairfax, Fauquier, Loudoun. Host: *Quercus*.
- Phymatocera fumipennis* (Norton).
Arlington, Clarke, Culpeper, Essex, Fairfax, Giles,
Loudoun, Louisa, Warren. Host: *Smilacina*.
- Phymatocera racemosae* Smith.
Clarke, Essex, Fairfax, Louisa, Warren. Host:
Polygonatum.
- Phymatocera smilacinae* Smith.
Arlington, Loudoun. Host: Adults collected from
Polygonatum and *Smilacina*.
- Rhadinoceraea nubilipennis* (Norton).
Page. Host: *Veratrum*.
- Stethomostus fuliginosus* (Schrank).
Clarke. Introduced. Host: *Ranunculus*.
- Tethida barda* (Say). Blackheaded ash sawfly.
Clarke, Essex, Fairfax, Giles, Loudoun, Louisa,
Montgomery. Host: *Fraxinus*.
- Tomostethus multicinctus* (Rohwer).
Brownheaded ash sawfly. Fairfax. Host: *Fraxinus*.

Allantinae

Larvae of all species are external leaf feeders. Smith (1979b) revised this subfamily for North America.

Allantus cinctus (Linnaeus). Curled rose sawfly.
Fairfax. Hosts: *Fragaria*, *Rosa*.

Allantus mellipes (Norton).
Clarke, Fairfax, Loudoun, Page, Roanoke, Tazewell.
Host: *Fragaria*.

Allantus nigrithibialis Rohwer.
Clarke, Fairfax, Loudoun. Host: *Rosa*.

Allantus viennensis (Schrank).
Clarke, Fairfax, Loudoun. Introduced. Host: *Rosa*. See
Smith (1975a).

Ametastegia aperta (Norton).
Arlington, Augusta, Clarke, Essex, Fairfax, Giles,
Lee, Louisa, Page, Warren.

Ametastegia articulata (Klug).
Arlington, Chesterfield, Clarke, Essex, Fairfax, Giles,
Loudoun, Louisa, Nelson, Northampton, Montgomery,
Rockingham, Warren. Hosts: *Polygonum*, *Rumex*.

Ametastegia becria Smith.
Augusta, Clarke, Essex, Fairfax, Giles, Louisa, Page,
Warren.

Ametastegia equiseti (Fallén).
Clarke, Essex, Fairfax, Louisa, Page. Host: *Rumex*.

Ametastegia glabrata (Fallén). Dock sawfly.
Clarke, Louisa, Montgomery. Hosts: *Polygonum*,
Rumex.

Ametastegia pallipes (Spinola). Violet sawfly.
Arlington, Clarke, Fairfax, Louisa, Page, Patrick.
Host: *Viola*.

Ametastegia pulchella (Rohwer).
Arlington, Augusta, Clarke, Essex, Fairfax, Loudoun,
Louisa, Prince William, Warren. Host: *Polygonum*.

Ametastegia recens (Say).
Giles, Louisa.

Ametastegia rocia Smith.
“Va.” Host: *Salix* (?).

Ametastegia tener (Fallén).
Clarke, Essex, Fairfax, Montgomery, Page. Host:
Rumex.

Ametastegia xenia Smith.
Appomattox, Floyd.

Dimorphopteryx autumnalis Rohwer.
Fairfax. Host: *Quercus*.

Dimorphopteryx melanognathus Rohwer.
Giles. Hosts: *Alnus*, *Betula*.

Dimorphopteryx pinguis (Norton).
Arlington, Augusta, Essex, Fairfax, King and Queen,
Louisa. Hosts: *Alnus*, *Betula*.

Dimorphopteryx virginicus Rohwer.
Arlington, Fairfax, Louisa. Host: *Castanea*.

Empria coryli (Dyar).
Essex, Louisa, Warren. Host: *Corylus*.

Empria evansi Smith.
Louisa.

Empria maculata (Norton).
Accomack, Arlington, Augusta, Clarke, Essex, Fairfax,
Grayson, Highland, Loudoun, Louisa, Madison,
Page, City of Petersburg, Rockingham, Warren.
Hosts: *Fragaria*, *Potentilla*, *Rubus*.

Empria multicolor (Norton).
Arlington, Augusta, Chesterfield, Clarke, Essex,
Fairfax, Fauquier, Floyd, Giles, Grayson, Highland,
Louisa. Hosts: *Alnus*, *Betula*.

Eriocampa juglandis (Fitch).
Clarke, Essex, Louisa. Host: *Juglans*.

Macremphytus semicornis (Say).
Clarke. Host: *Cornus*.

Macremphytus tarsatus (Say).
Augusta, Clarke, Loudoun, Warren. Host: *Cornus*.

Macremphytus testaceus (Norton).
Arlington, Augusta, Clarke, Essex, Fairfax, Floyd,
Giles, Loudoun, Louisa, Montgomery, Nelson,
Rockingham. Host: *Cornus*.

Monosoma inferentia (Norton).
Louisa. Host: *Alnus*.

- Monostegia abdominalis* (Fabricius).
Clarke, Essex, Fairfax, Louisa, Montgomery. Host: *Lysimachia*.
- Phrontosoma belfragei* (Cresson).
Fairfax. Host: *Cornus* (?).
- Pseudosiobla excavata* (Norton).
Arlington, Essex, Fairfax, Louisa, City of Richmond, Spotsylvania. Host: *Cephalanthus*.
- Taxonus borealis* MacGillivray.
Augusta.
- Taxonus epicera* (Say).
Augusta, Clarke, Essex, Fairfax, Lee, Loudoun, Louisa, City of Richmond, Warren.
- Taxonus pallicoxus* (Provancher).
Augusta, Clarke, Loudoun, Louisa. Host: *Fragaria*.
- Taxonus pallidicornis* (Norton).
Augusta, Clarke, Essex, Fairfax, Loudoun, Louisa, Montgomery, Warren. Host: *Rubus*.
- Taxonus pallipes* (Say).
Augusta, Clarke, Essex, Fairfax, Loudoun, Louisa, Warren. Host: *Fragaria*.
- Taxonus proximus* (Provancher).
Augusta, Louisa.
- Taxonus rufocinctus* (Norton).
Augusta, Clarke, Loudoun, Louisa. Host: *Rubus*.
- Taxonus spiculatus* (MacGillivray).
Augusta.
- Taxonus terminalis* (Say).
Augusta, Clarke, Essex, Fairfax, Loudoun, Louisa, Roanoke, Warren. Host: *Rubus*.
- Tenthredininae
- Larvae of all species are external leaf feeders. Host plants are poorly known for members of this subfamily. See Smith (1991) for flight records for 28 species of *Macrophya*. *Tenthredo* is the large remaining group that needs study; there are no keys to species that occur in Virginia. Literature that is helpful for other groups is as follows: *Aglaostigma* (Ross, 1943a); *Macrophya* (Gibson, 1980); and *Lagium* (Smith, 1986a, 1994b). Goulet & Smith (1993) described several species of *Tenthredo* from eastern United States.
- Aglaostigma quattuordecimpunctatum* (Norton).
Augusta, Grayson, Smyth. Host: *Podophyllum peltatum* L.
- Aglaostigma semiluteum* (Norton).
Arlington, Clarke, Essex, Fairfax, Frederick, Grayson, City of James, Loudoun, Louisa, Montgomery, Page, Smyth, Warren, Washington. Host: *Impatiens capensis* Meerb.
- Lagium atroviolaceum* (Norton).
Albemarle, Arlington, City of Chesapeake, Clarke, Essex, Fairfax, Giles, Henrico, Loudoun, Louisa, Madison, Montgomery, Nelson, Patrick, Rockingham, Washington. Host: *Sambucus*.
- Leucopelmonus annulicornis* (Harrington).
Augusta, Clarke, Fairfax, Giles, Grayson, Lee, Madison, Smyth.
- Macrophya alba* MacGillivray.
Clarke, Fairfax, Loudoun, Louisa, Montgomery, Rockingham, Smyth, Warren.
- Macrophya albomaculata* (Norton).
Arlington, Carroll, Clarke, Essex, Fairfax, Grayson, Loudoun, Louisa, Rockingham, Warren. Host: *Sambucus*.
- Macrophya bifasciata* (Say).
Clarke, Essex, Giles, Loudoun, Louisa, Montgomery, Tazewell.
- Macrophya cassandra* Kirby.
Arlington, Augusta, Clarke, Essex, Fairfax, Giles, Hanover, Loudoun, Louisa, Montgomery, Rockbridge, Warren. Host: *Carya*.
- Macrophya cinctula* (Norton).
Arlington, Campbell, City of Chesapeake, Essex, Fairfax, Giles, Loudoun, Louisa.
- Macrophya epinota* (Say).
Clarke, Essex, Fairfax, Grayson, Louisa, Montgomery, Rockingham. Host: *Sambucus*.
- Macrophya externa* (Say).
Fairfax, Louisa.
- Macrophya flavicoxae* (Norton).
Arlington, Clarke, Essex, Fairfax, Floyd, Giles, Grayson, Greenville, Loudoun, Louisa, Montgomery, Rockingham, Smyth, Washington.

Macrophya flavolineata (Norton).

Clarke, Essex, Fairfax, Giles, Loudoun, Louisa, Montgomery, Russell, Smyth, Warren.

Macrophya flicta MacGillivray.

Arlington, Augusta, Clarke, Essex, Fairfax, Giles, Loudoun, Louisa, Montgomery, Rockingham. Host: *Prunus*.

Macrophya formosa (Klug).

Arlington, Augusta, Clarke, Craig, Essex, Fairfax, Giles, Grayson, Loudoun, Louisa, Montgomery, Page, Rockingham, Warren.

Macrophya fuliginea Norton.

Essex, Fairfax, Giles, Louisa. Host: *Castanea*.

Macrophya goniphora (Say).

Arlington, Augusta, City of Chesapeake, Clarke, Essex, Fairfax, Giles, Loudoun, Louisa, Montgomery, Rockingham.

Macrophya lineatana Rohwer.

Arlington, Clarke, Essex, Fairfax, Loudoun, Louisa.

Macrophya macgillivrayi Gibson.

Arlington, Bath, Clarke, Essex, Fairfax, Giles, Loudoun, Louisa, Montgomery, Rockingham, Russell, Warren.

Macrophya maculilabris Konow.

Arlington, Clarke, Fairfax, Floyd, Louisa, Montgomery, Rockingham. Host: *Sambucus*.

Macrophya masneri Gibson.

Clarke, Loudoun, Rockingham.

Macrophya masoni Gibson.

Augusta, Fairfax, Giles, Louisa.

Macrophya mensa Gibson.

Augusta, Clarke, Essex, Fairfax, Giles, Loudoun, Louisa, Stafford.

Macrophya mixta MacGillivray.

Giles, Louisa. Host: *Viburnum*.

Macrophya nigra (Norton).

Augusta, Bath, Essex, Fairfax, Grayson, Lee, Loudoun, Louisa, Rockingham. Host: *Chelone*. See Stamp (1984).

Macrophya nigristigma Rohwer.

Arlington, Clarke, Fairfax, Louisa. Host: *Carya*.

Macrophya nirvana Gibson.

Rockingham.

Macrophya pannosa (Say).

Clarke, Essex, Fairfax, Greene, Loudoun, Louisa, Montgomery, Patrick, Smyth, Tazewell. Host: *Sambucus*.

Macrophya phylacida Gibson.

Carroll, Clarke, Essex, Fairfax, Loudoun, Smyth, Tazewell.

Macrophya pulchella (Klug).

Arlington, Augusta, Clarke, Essex, Fairfax, Floyd, Giles, Loudoun, Louisa, Montgomery, Warren.

Macrophya punctata MacGillivray.

Clarke, Fairfax, Loudoun. Host: *Sambucus*.

Macrophya senacca Gibson.

Clarke, Essex, Fairfax, Loudoun, Louisa.

Macrophya serratalineata Gibson.

Giles.

Macrophya simillima Rohwer.

Clarke, Carroll, Fairfax, Loudoun, Rockingham. Host: *Rudbeckia*.

Macrophya succincta Cresson.

Clarke, Loudoun, Montgomery.

Macrophya tibiator Norton.

Arlington, Augusta, Fairfax, Loudoun, Louisa, Montgomery.

Macrophya trisyllaba (Norton).

Arlington, Clarke, Essex, Fairfax, Giles, Grayson, Loudoun, Louisa, Montgomery, Page, City of Richmond, Rockingham, Warren. Host: *Sambucus*.

Macrophya varia (Norton).

Augusta, Clarke, Essex, Fairfax, Giles, Loudoun, Louisa.

Macrophya zoe Kirby.

Clarke, Fairfax, Louisa, Warren, Washington.

Pachyprotasis rapae (Linnaeus).

Grayson, Smyth. Hosts: *Antirrhinum*, *Betonica*, *Fraxinus*, *Scrophularia*, *Solidago*.

Tenthredo angulifera (Norton).

Arlington, Grayson, Montgomery, Page.

Tenthredo basilaris Say.
Giles, Page, Washington.

Tenthredo carolina (Rohwer).
Clarke, Essex, Fairfax, Wise.

Tenthredo fernowi Goulet & Smith.
Augusta, Clarke, Fairfax, Giles, Loudoun, Shenandoah,
Warren.

Tenthredo fisheri (Rohwer).
Arlington, Clarke, Fairfax, Rockingham, Smyth.

Tenthredo grandis (Norton).
Arlington, Clarke, Essex, Fairfax, Louisa, Page,
Warren. Host: *Chelone glabra* L. See Stamp (1984).

Tenthredo leucostoma Kirby.
Giles, Grayson, Rockingham.

Tenthredo lobata (Norton).
Augusta, Page, Rockingham.

Tenthredo mantha Ross.
Fairfax, Pulaski, Rockingham.

Tenthredo masneri Goulet & Smith.
Giles, Grayson, Stony Man Mountain [on Madison-
Page county line].

Tenthredo mellicoxa Provancher.
Clarke, Fairfax, Loudoun, Warren.

Tenthredo nimbipennis Cresson.
Clarke, Rockingham.

Tenthredo piceocincta (Norton) (?).
Page. Identity uncertain.

Tenthredo prosopa Stannard.
Giles.

Tenthredo rufopecta (Norton).
Arlington, Augusta, Clarke, Essex, Fairfax, Fauquier,
Giles, Grayson, Loudoun, Louisa, Montgomery, Page,
Rockingham, Warren.

Tenthredo rurigena MacGillivray.
Clarke, Giles, Louisa.

Tenthredo secunda MacGillivray.
Giles, Grayson.

Tenthredo verticalis Say.
Arlington, Clarke, Essex, Fairfax, Giles, Grayson,
Loudoun, Louisa, Rockingham.

Tenthredo yuasi MacGillivray.
Clarke, Loudoun, Louisa.

SIRICIDAE

Larvae are wood borers. Some are easily transported by commerce in lumber outside their native ranges (e.g., the record of *S. longicauda*). Other species also could be found emerging from construction wood imported from the West. Smith & Schiff (2002) treated the species for eastern United States.

Eriotremex formosanus (Matsumura).
Northampton, City of Virginia Beach. Hosts: *Quercus* preferred, also *Carya*, *Liquidambar*. Introduced. See Smith (1996). These are the northernmost records for this species in the United States.

Sirex areolatus (Cresson).
City of Virginia Beach (Cape Henry). Hosts: *Cupressus* sp., *Juniperus* spp., *Libocedrus*, *Pinus*, *Pseudotsuga*, *Sequoia*, *Taxodium*, *Thuja*.

Sirex edwardsii Brullé.
Essex, Fairfax, Montgomery, City of Virginia Beach. Hosts: *Pinus echinata* Mill., *P. elliotii* Engelm., *P. palustris* Mill., *P. rigida* Mill., *P. strobus* L., *P. virginiana* Mill. Also recorded from *Picea*.

Sirex longicauda Middlekauff.
Campbell (Lynchburg). A western species, probably imported in building materials (Smith & Schiff, 2002). Hosts: *Abies*, *Pinus*, *Pseudotsuga*.

Sirex nigricornis Fabricius.
Essex, Fairfax, Montgomery, City of Norfolk, Page, City of Richmond, City of Virginia Beach. Hosts: *Pinus clausa* (Chapm. ex Engelm.) Vasey ex Sarg., *P. echinata* Mill., *P. palustris* Mill., *P. rigida* Mill., *P. strobus* L., *P. taeda* L., *P. virginiana* Mill. Also recorded from *Picea*.

Tremex columba (Linnaeus). Pigeon tremex.
Appomattox, Arlington, Augusta, Bedford, Clarke, Essex, Fairfax, Frederick, Giles, Hanover, Louisa, Loudoun, Montgomery, City of Norfolk, Nottoway, City of Richmond, Roanoke, Smyth, Warren, Washington. Hosts: *Acer*, *Carpinus*, *Carya*, *Celtis*, *Fagus*, *Malus*, *Platanus*, *Pyrus*, *Quercus*, *Ulmus*.

Urocerus albicornis (Fabricius).
Arlington, Montgomery, Washington. Hosts: *Abies*,
Larix, *Picea*, *Pinus*, *Pseudotsuga*, *Thuja*, *Tsuga*.

Urocerus cressoni Norton.
Essex, Fairfax, Montgomery. Hosts: *Abies*, *Picea*,
Pinus rigida Mill., *P. taeda* L.

Urocerus taxodii (Ashmead).
Essex, City of Virginia Beach. Host: *Taxodium*
distichum (L.) Rich.

America.

Orussus minutus Middlekauff.
Clarke, Essex, Fairfax, Louisa, Warren.

Orussus sayii (Westwood).
Essex

Orussus terminalis (Newman).
Clarke, Essex.

XIPHYDRIIDAE

Larvae are wood borers in small limbs of their host plants. Smith (1976b) revised this family for North America.

Xiphydria abdominalis Say.
Louisa. Host: *Tilia americana* L.

Xiphydria canadensis Provancher.
City of Virginia Beach (June 24, 1915).

Xiphydria champlaini Rohwer.
Fairfax. Host: *Carpinus caroliniana* Walt.

Xiphydria maculata Say.
Augusta, City of Chesapeake, Clarke, Essex, Fairfax,
Giles, Loudoun, Louisa, City of Newport News, Page.
Hosts: *Acer*, also recorded from *Tilia* and *Malus*.

Xiphydria mellipes Harris.
Arlington, Grayson, Madison, Roanoke. Host: *Betula*.

Xiphydria polia Smith.
Fairfax, Montgomery.

Xiphydria scafa Smith.
Arlington, Fairfax, Louisa. Host: *Carpinus americana*
Walt.

Xiphydria tibialis Say.
Clarke, Essex, Fairfax, Loudoun, Louisa. Hosts: *Ulmus*
americana, also recorded from *Acer*, *Betula*, *Crataegus*,
Fagus, *Fraxinus*, *Prunus*, *Quercus*, *Rhus*, *Tilia*.

ORUSSIDAE

Larvae are parasitoids of wood-boring Coleoptera. Middlekauff (1983) revised this family for North

CEPHIDAE

Larvae of *Cephus* and *Trachelus* are stem borers in grasses; those of *Hartigia* and *Janus* are stem or twig borers in their host plants. *Hartigia* was revised by Smith (1986b) and Smith & Solomon (1989) provided a key to species of *Janus*.

Cephus pygmaeus (Linnaeus).
European wheat stem sawfly. Clarke, Essex, Giles.
Hosts: Cultivated grasses such as wheat and, to a lesser extent, barley and rye. *Bromus secalinus* L., *Hordeum vulgare* L., *Secale cereale* L., *Triticum aestivum* L.

Hartigia bicincta (Provancher).
Louisa.

Hartigia trimaculata (Say).
Arlington, Clarke, Essex, Fairfax, Loudoun, Louisa,
Montgomery, Scott. Hosts: *Rosa*, *Rubus*.

Janus abbreviatus (Say). Willow shoot sawfly.
Clarke, Essex, Fairfax, Louisa. Hosts: *Populus*, *Salix*.

Janus bimaculatus (Norton).
Augusta, Clarke, Essex, Fairfax, Loudoun, Louisa.
Host: *Viburnum*.

Janus integer (Norton). Currant stem girdler.
Augusta, Clarke, Essex, Fairfax, Loudoun, Louisa,
Montgomery. Host: *Ribes*.

Janus quercusae Smith.
Essex, Louisa. Host: *Quercus*.

Trachelus tabidus (Fabricius). Black grain stem sawfly.
Arlington, Fairfax, Fauquier, Mecklenburg, Mont-
gomery, Rockingham. Introduced. Hosts: Cultivated
grasses such as wheat, barley, rye, oats. No wild grass
hosts known in North America. *Avena*, *Hordeum*
vulgare L., *Secale cereale* L., *Triticum aestivum* L.

POTENTIAL SPECIES

Following is a list of species for which I have not seen Virginia records but are likely to occur in the state. The list is undoubtedly incomplete and other species are likely to extend either south or north to Virginia.

PAMPHILIIDAE

Acantholyda angulata (MacGillivray).
Southeastern Canada south to North Carolina, Georgia.
Host: *Pinus*.

Acantholyda erythrocephala (Linnaeus).
Pine false webworm. Northeastern states to
Pennsylvania. Hosts: Various *Pinus*.

Acantholyda ruficeps (Harrington).
Quebec south to North Carolina. Host: *Pinus*.

Acantholyda poepigii (Brischke & Zaddach).
Pennsylvania, North Carolina, Georgia.

Pamphilius nigriritibialis Rohwer.
Quebec to North Carolina.

DIPRIONIDAE

Neodiprion sertifer (Geoffroy).
European pine sawfly. Introduced. Known in the
northeastern states south to Pennsylvania. Host: *Pinus*.
I have not seen specimens from Virginia; identities of
this species on certain websites reporting it from
Virginia need confirmation.

TENTHREDINIDAE

Nematinae

Caulocampus acericaulis (MacGillivray).
Maple petiole borer. Northeastern states south to
Maryland, West Virginia. Host: *Acer*.

Hemichroa crocea (Geoffroy).
Striped alder sawfly. This species has been taken in
New York and Pennsylvania and in the mountains of
North Carolina. Host: *Alnus*.

Hoplocampa brevis (Klug).
Northeastern states south to Maryland. Host: *Pyrus*,
larvae feed in developing fruit or pears.

Hoplocampa testudinea (Hartig).
European apple sawfly. Introduced. Northeastern states,
and has been taken in Montgomery Co., Maryland
(Smith, 2003). Host: *Malus*. Larvae feed in developing
fruits.

Pikonema dimmockii (Cresson).
Greenheaded spruce sawfly. Known in the northeastern
states and in the mountains of North Carolina.

Pristiphora rufipes (Serville).
Introduced. Northeastern states south to West Virginia.
Host: *Aquilegia*. In previous literature as *Pristiphora*
aquilegiae (Vollenhoven).

Heterarthrinae

Fenella nigrita Westwood.
Northeastern states south to West Virginia. Hosts:
Agrimonia, *Potentilla*. A leafminer.

Fenusa dohrnii (Tischbein).
European alder leafminer. Host: *Alnus*. Has been found
as far south as Garrett Co., Maryland.

Fenusa pusilla (Lepeletier).
Birch leafminer. Host: *Betula*. Has been taken on
ornamental birch in Silver Spring, Maryland.

Blennocampinae

Monophadnoides quebecensis Smith.
Known from Quebec, West Virginia, and the mountains
of North Carolina.

Stethomostus fuliginosus (Schrank).
Northeastern, south to Maryland. Host: *Ranunculus*.

Allantinae

Dimorphopteryx abnormis Rohwer.
Occurs in nearby West Virginia.
Hosts: *Amelanchier*, *Crataegus*, *Prunus*, *Pyrus*.

Tenthredininae

Macrophya propinqua Harrington.
Northeastern; occurs in nearby West Virginia.

Tenthredo appalachia Goulet & Smith.
Recorded from nearby West Virginia.

Tenthredo mellina (Norton).
Recorded from Maryland.

Tenthredo semirufa Norton.
New Hampshire south to North Carolina.

Tenthredo subcoerulea Eschscholtz.
Quebec to Florida.

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