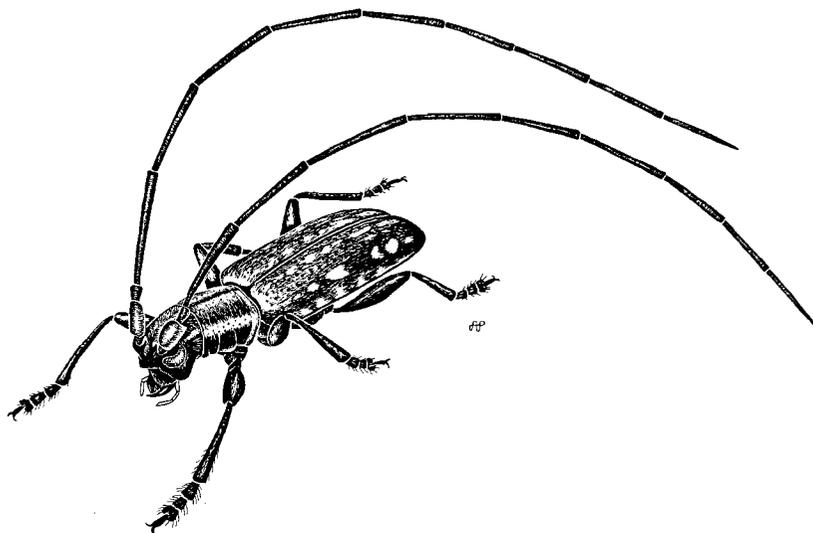


The  
**GREAT LAKES ENTOMOLOGIST**



Vol. 10, No. 1

Spring 1977



An Annotated List of the Cerambycidae of Michigan (Coleoptera)  
Part II, the Subfamilies Lepturinae and Lamiinae

D. C. L. Gosling and N. M. Gosling

THE GREAT LAKES ENTOMOLOGIST

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TABLE OF CONTENTS

AN ANNOTATED LIST OF THE CERAMBYCIDAE OF MICHIGAN (COLEOPTERA)  
PART II, THE SUBFAMILIES LEPTURINAE AND LAMIINAE

D. C. L. Gosling and N. M. Gosling

INTRODUCTION . . . . .	1
SUBFAMILY LEPTURINAE . . . . .	1
SUBFAMILY LAMIINAE . . . . .	18
ACKNOWLEDGMENTS . . . . .	36
LITERATURE CITED . . . . .	37

COVER ILLUSTRATION

*Dorcaschema alternatum* (Say). Drawing by Arwin Provonsha, Curator and Illustrator,  
Department of Entomology, Purdue University.

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AN ANNOTATED LIST OF THE CERAMBYCIDAE  
OF MICHIGAN (COLEOPTERA)  
PART II, THE SUBFAMILIES LEPTURINAE AND LAMIINAE<sup>1</sup>

D. C. L. Gosling and N. M. Gosling<sup>2</sup>

This is a continuation of Part I of an annotated list of the Cerambycidae known from Michigan, and includes the remaining subfamilies Lepturinae and Lamiinae. The format is similar to that used in Part I. We have largely followed the systematic order of Chemsak and Linsley (1975) in this part of the list.

Keys for the identification of adult Lepturinae can be found in Linsley and Chemsak (1972; in press). References to keys for adult Lamiinae are listed under that subfamily. Many larvae may be identified through the keys in Craighead (1923), but not all Michigan species are covered.

A. W. Andrews, I. J. Cantrall, the senior author, and others have collected Cerambycidae at the Edwin S. George Reserve, a research facility of the University of Michigan located in Livingston County. Because of the special interest in the fauna of this study area, it is worthwhile to note that all of the species recorded in this list as occurring in Livingston County have been collected at the George Reserve.

Subfamily LEPTURINAE

Some generalizations about the habits of adult Lepturinae may be useful to collectors of these beetles. The majority of lepturine species feed as larvae within decaying logs and as adults on pollen. These anthophilous adults can often be found on flowers in great numbers and may then be easily collected. They are attracted to a variety of blossoms, but usually display distinct preferences as to plant species and situation.

The most attractive blossoms for typical adult lepturines are those of white-flowering shrubs. Such flowers in Michigan that seem especially attractive include those of New Jersey-tea (*Ceanothus americanus* L.), alternate-leaf dogwood (*Cornus alternifolia* L.), round-leaf dogwood (*C. rugosa* Lam.), gray dogwood (*C. racemosa* Lam.), maple-leaf viburnum (*Viburnum acerifolium* L.), and blackberries (*Rubus* spp.). Wild roses (*Rosa* spp.) are also very attractive to these beetles. Although lepturines will be found primarily on such shrubs, they may feed also at flowers of other shrubs, trees, and forbs in the same area, and will change even their principal feeding sites as the season progresses. Thus a typical species in southern Michigan might aggregate on maple-leaf viburnum or blackberry in early June, shift to roses as these shrubs finish flowering, then to New Jersey-tea in late June and early July, and wild carrot (*Daucus carota* L.) later in July when no shrubs are in bloom. A complete listing of all the flowers at which lepturines have been observed feeding would be very lengthy and does not seem worthwhile including here.

The best collecting will usually be found on shrubs growing along the edge of a mature woods with decaying, downed timber. Lepturines are more strongly attracted to flowers in full sunlight, and shrubs growing in shade are generally less productive collecting sites. However, in southern Michigan, lepturines are noticeably less active at the often high temperatures of mid-day and afternoon in late June and July. In this area the best collecting is usually found in the morning, or on flowers exposed only to partial sunlight.

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<sup>1</sup>Part I (Gosling, 1973) included the subfamilies Parandrinae, Prioninae, Spondyliinae, Aseminae, and Cerambycinae.

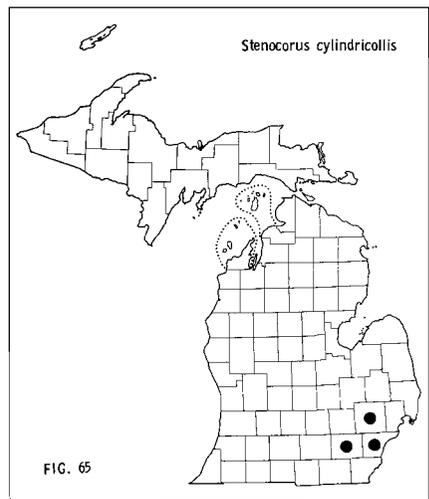
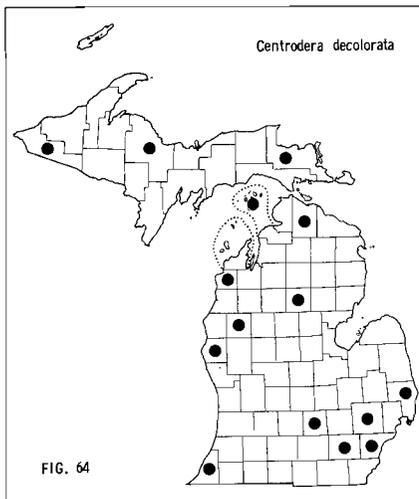
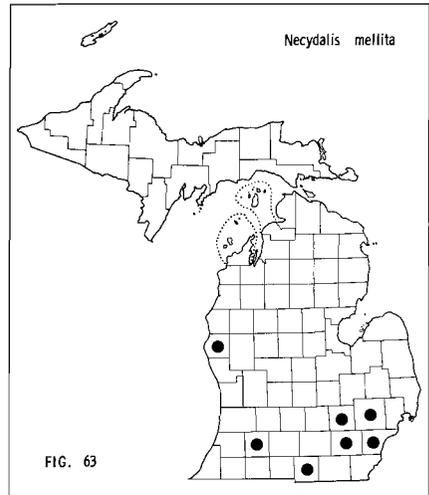
<sup>2</sup>R.R.1, Box 149, White Pigeon, Michigan 49099.

Genus **DESMOCERUS** Serville

**palliatu**s (Forster) 1771. (Fig. 62) Mid-May to mid-August. Larvae bore in the roots of living elder (*Sambucus canadensis* L.) and pupate in the stems. Adults are usually collected from the foliage and flowers of the host plant.

Genus **NECYDALIS** Linnaeus

**mellita** (Say) 1835. (Fig. 63) Late June to mid-July. Larvae bore in the heartwood of dead oak and chestnut. Perry (1975) has reared this species from pine.



Genus **CENTRODERA** LeConte

*decolorata* (Harris) 1841. (Fig. 64) Late May through July. Larvae have been recorded feeding in the heartwood of living and dead hardwoods. The adults are attracted to light.

Genus **STENOCORUS** Fabricius

*cylindricollis* (Say) 1824. (Fig. 65) Late June to mid-July. Adults have been recorded from hickory and sumac.

*schaumi* (LeConte) 1850. (Fig. 66) Late May to early July. Linsley and Chemsak (1972) list maple, beech, ash, and Juneberry as host plants.

*cinnamopterus* (Randall) 1838. (Fig. 67) June. Adults are collected on the foliage and flowers of shrubs, and are also attracted to light.

*vittiger* (Randall) 1838. (Fig. 68) Late May through July. Adults are found on flowering shrubs.

Genus **ENCYCLOPS** Newman

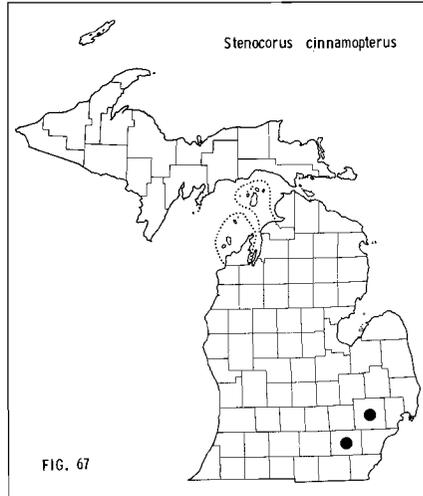
*caerulea* (Say) 1826. (Fig. 69) Late May through July. Larvae bore in the outer bark of living hardwoods. Perry (1975) has reared this species from pine. Adults are collected on flowering shrubs.

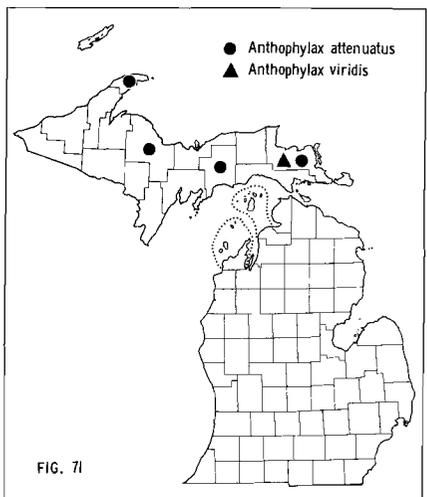
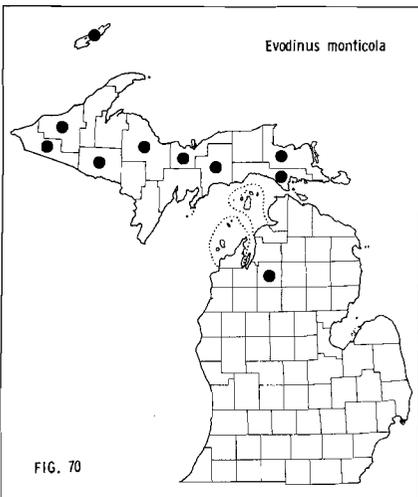
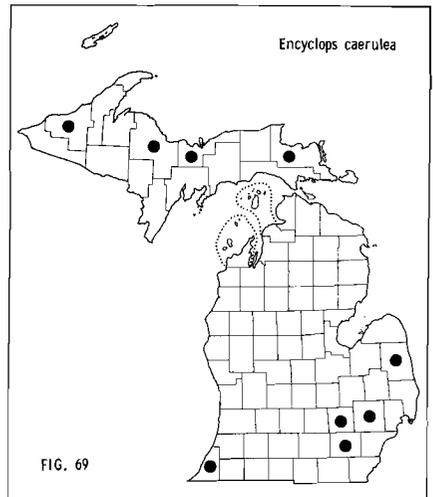
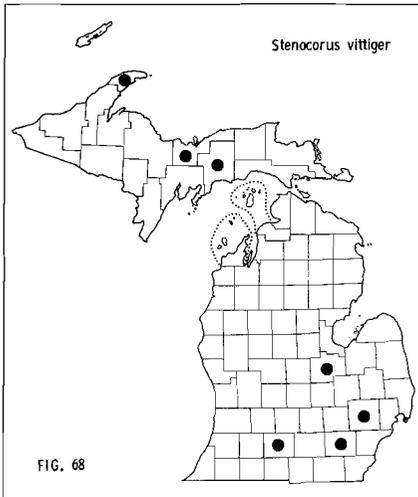
Genus **PACHYTA** DeJean

*lamed liturata* Kirby 1837. This species was recorded from Isle Royale by Adams (1909). His single specimen was collected at Rock Harbor on 31 July. Hubbard and Schwarz (1878) reported that LeConte had collected *liturata* in the Lake Superior region, but they did not succeed in collecting it themselves.

Genus **EVODINUS** LeConte

*monticola* (Randall) 1838. (Fig. 70) Mid-June through July. Larvae bore beneath the bark of dead conifers and enter the soil for pupation. Adults are collected on flowering shrubs.



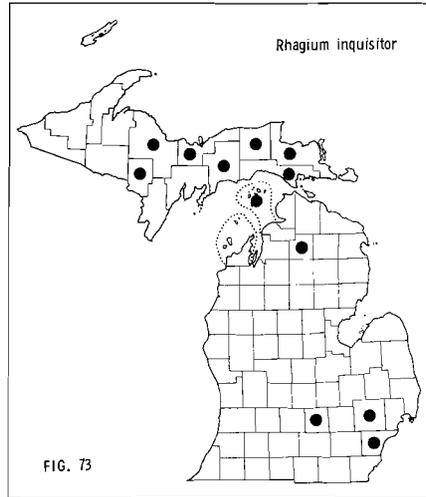
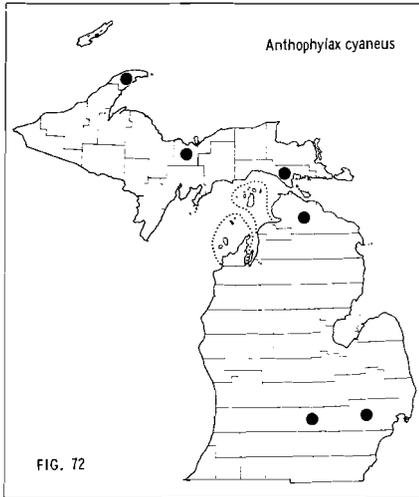


#### Genus ANTHOPHYLAX LeConte

*attenuatus* (Haldeman) 1847. (Fig. 71) Early June to early July. Larvae bore in decaying hardwood logs and pupate in the soil. Linsley and Chemsak (1972) recorded adults attracted to the male cones of pine.

*viridis* LeConte 1850. (Fig. 71) Early July. Larvae bore in decaying maple, beech, and birch. Adults are collected on flowering trees and shrubs. The type locality for this species is Eagle Harbor in Keweenaw County.

*cyaneus* (Haldeman) 1847. (Fig. 72) Late May to early July. The habits of the larvae and adults are believed similar to *viridis*. We collected a number of adults in late June in an open pine forest in Alger County. The beetles were resting on low-growing



vegetation, crawling on the ground, or sluggishly flying less than 1 m above the forest floor.

#### Genus RHAGIUM Fabricius

*inquisitor* (Linnaeus) 1758. (Fig. 73) Late May through July. The larvae of this holarctic species feed under the bark of dead conifers. Adults may be collected from the bark of recently dead pine and other conifers.

#### Genus SACHALINOBIA Jacobson

*rugipennis* (Newman) 1844. This species has been collected twice in the Upper Peninsula; by A. W. Andrews in Chippewa County on 8 July, and by I. J. Cantrall in Marquette County on 20 June. The larvae feed in dead conifers. Gardiner (1970) recorded capturing adults at turpentine bait.

#### Genus GAUROTES LeConte

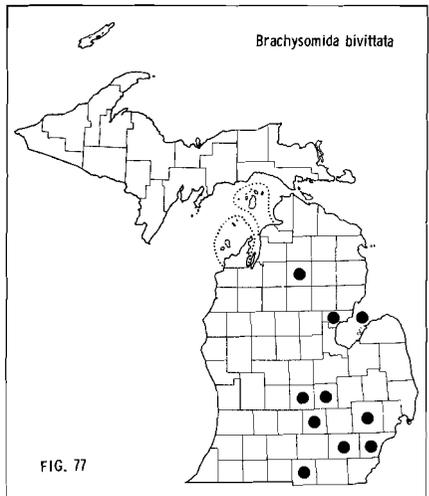
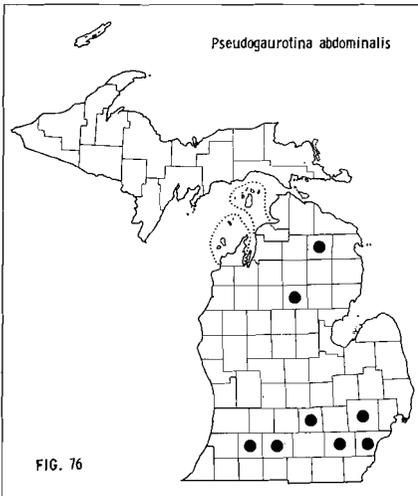
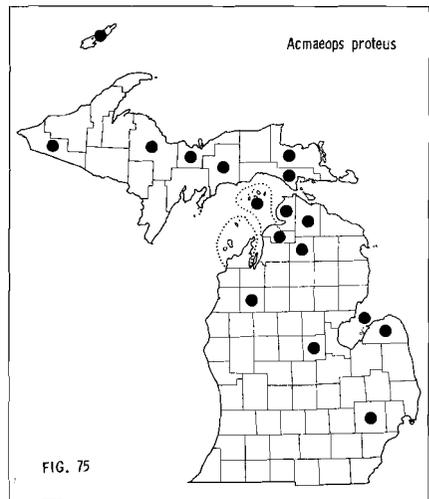
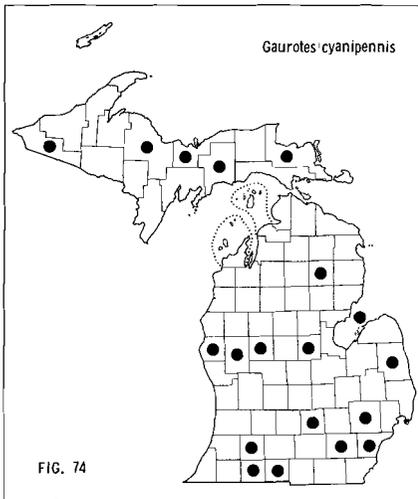
*cyanipennis* (Say) 1824. (Fig. 74) Late May through July. The larvae feed in dead hardwoods and the adults visit flowers. In Gogebic County they are locally common on the blossoms of alternate-leaf dogwood.

*thoracica* (Haldeman) 1847. A single specimen was collected by the senior author on 2 June at the E. S. George Reserve in Livingston County. The host plant of this species is unknown, and there is no record of it visiting flowers.

#### Genus ACMAEOPS LeConte

*proteus* (Kirby) 1837. (Fig. 75) Late May to early August. Larvae feed in recently dead conifers. Adults may be collected from flowers and are attracted to turpentine baits (Gardiner, 1970). We have also collected adults on freshly cut pine branches and logs.

*discoideus* (Haldeman) 1847. Hubbard and Schwarz (1878) recorded this species from Marquette. It breeds in dead pine.

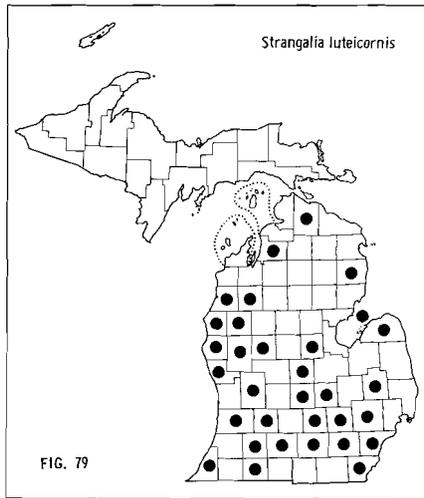
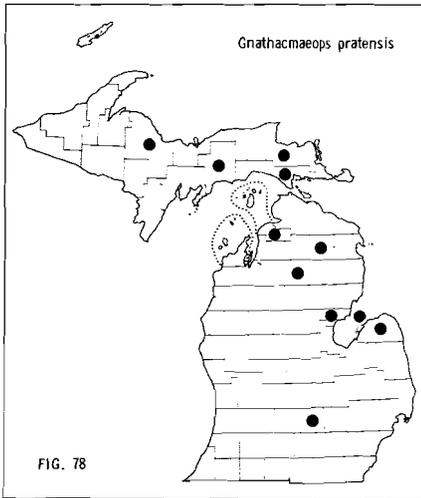


*rufula* (Haldeman) 1847.<sup>3</sup> This species was recorded from Isle Royale by Hubbard and Schwarz (1878), and we collected it on 22 June in Alger County on freshly cut spruce branches. Gardiner (1970) has collected it in Quebec and Ontario from Labrador tea (*Ledum groenlandicum* Oed.) and other flowers.

#### Genus PSEUDOGAUROTINA Plavilstshikov

*abdominalis* (Bland) 1862. (Fig. 76) Mid-May to mid-July. The handsome adults may be collected on flowers. In St. Joseph County we have found this species locally common on blackberry blossoms in early June, and on the blossoms of tulip-tree (*Liriodendron tulipifera* L.) although these are seldom accessible. The larval host is unknown.

<sup>3</sup>This species has been placed in a new genus by Linsley and Chemsak (in press).



#### Genus BRACHYSOMIDA Casey

*bivittata* (Say) 1824. (Fig. 77) Late May to mid-July. The larval host is unknown. Adults are attracted to flowers.

#### Genus GNATHACMAEOPS Linsley and Chemsak

*pratensis* (Laicharting) 1784. (Fig. 78) Late May to early July. This holarctic species breeds in dead conifers and the adults visit flowers.

#### Genus METACMAEOPS Linsley and Chemsak

*vittata* (Swederus) 1787. This species was collected on 4 July in Oakland County by A. W. Andrews. It has been recorded as breeding in tulip-tree and chestnut, and the adults are attracted to flowers.

#### Genus STRANGALIA Serville

Four species of *Strangalia* are known from Michigan and have similar habits. The larvae of all these species feed in decayed hardwoods, and the adults are attracted to flowers, especially wild roses. The first two species listed are abundant in southern Michigan, while the others are not commonly collected.

*luteicornis* (Fabricius) 1775. (Fig. 79) Mid-June to early August.

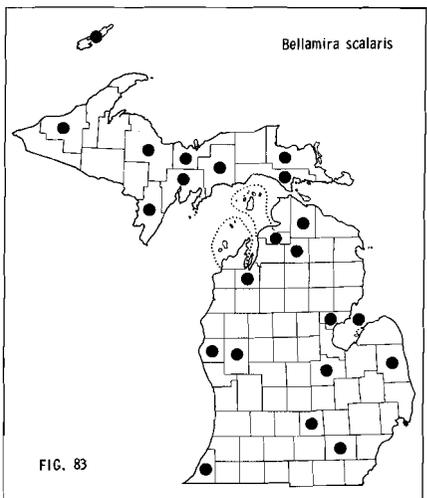
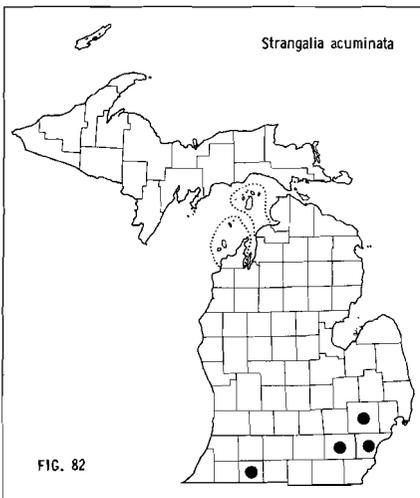
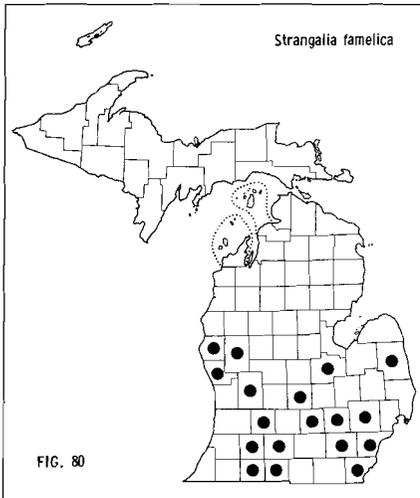
*famelica* Newman 1841. (Fig. 80) Late May to early August.

*bicolor* (Swederus) 1787. (Fig. 81) June.

*acuminata* (Olivier) 1795. (Fig. 82) June.

#### Genus BELLAMIRA LeConte

*scalaris* (Say) 1827. (Fig. 83) Late May to early August. This species breeds in decayed hardwoods and conifers, and the adults visit flowers.



#### Genus CHARISALIA Casey

*americana* (Haldeman) 1847. (Fig. 84) Mid-June to late July. Decayed sour-gum (*Nyssa sylvatica* Marsh.) has been recorded as a host plant for this species.

#### Genus ALOSTERNIDA Podany

*chalybea* (Haldeman) 1847. This species was collected on 4 July in Oakland County by A. W. Andrews. Its habits are unknown.

Genus GRAMMOPTERA Serville

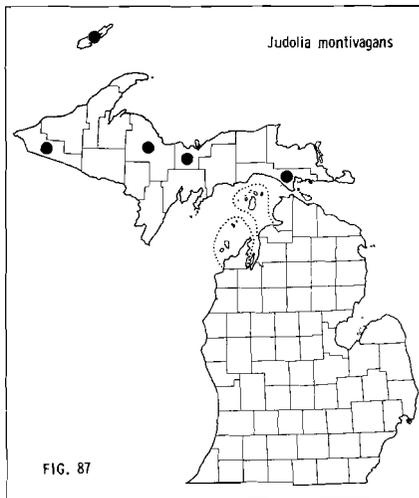
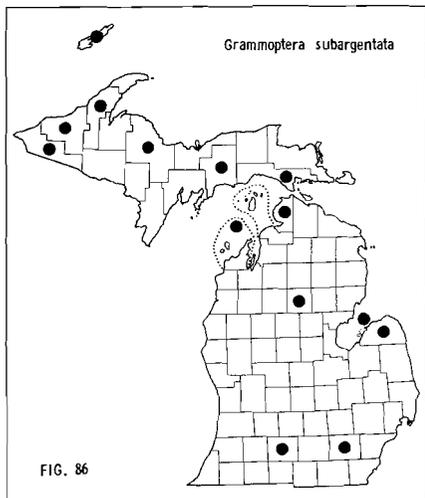
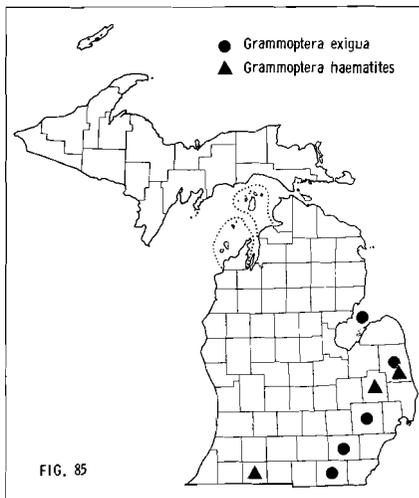
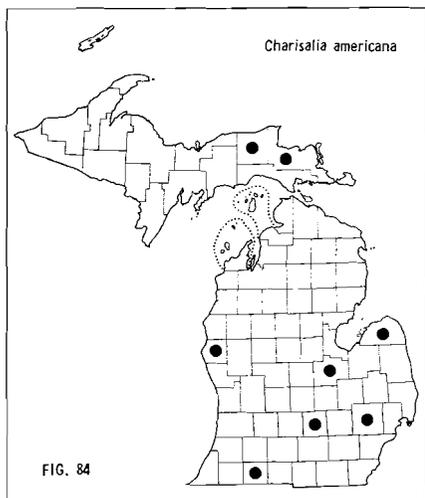
*exigua* (Newman) 1841. (Fig. 85) Early June to early July. This species has been recorded breeding in dead hardwoods.

*haematites* (Newman) 1841. (Fig. 85) Late May to early July. The host plant of this species is unknown. We have collected adults on flowers of gray dogwood and New Jersey-tea in St. Joseph County.

*subargentata* (Kirby) 1837. (Fig. 86) Mid-June to early July. Adults are common on flowers of alternate-leaf dogwood and other shrubs and trees in the Upper Peninsula.

Genus JUDOLIA Mulsant

*cordifera* (Olivier) 1795. This species has been collected on Isle Royale on 9 July (MSUC), and was recorded from the same locality by Hubbard and Schwarz (1878).



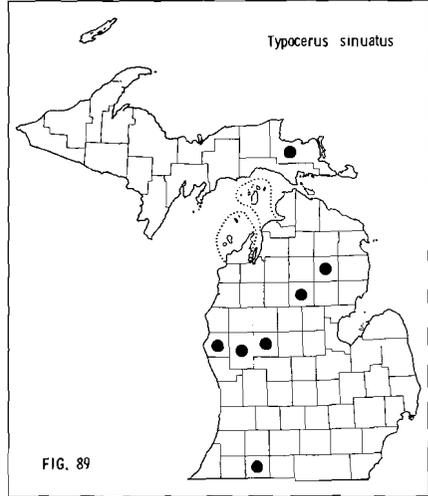
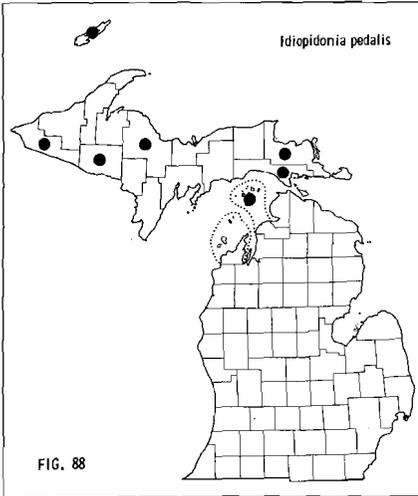
*montivagans* Couper 1964. (Fig. 87) Late June to mid-July. Adults are found on flowers. Gardiner (1970) reported oviposition on decaying pine.

Genus **IDIOPIDONIA** Swaine and Hopping

*pedalis* (LeConte) 1861. (Fig. 88) Late June to mid-July. We have collected adults from the flowers of alternate-leaf dogwood in the western Upper Peninsula. The host plant is unknown.

Genus **TYPOCERUS** LeConte

*sinuatus* (Newman) 1841. (Fig. 89) Early June to late July. The larvae feed in the crown and roots of little bluestem (*Andropogon scoparius* Michx.) (Wade, 1922). This characteristic prairie grass is found in Michigan in relict prairie communities, along roads and railroads, and on dry, sandy soils in several areas. The adults may be collected from the flowers of New Jersey-tea, as well as those of tall coreopsis (*Coreopsis tripteris* L.), black-eyed Susan (*Rudbeckia hirta* L.), and other wildflowers often found in such habitats.



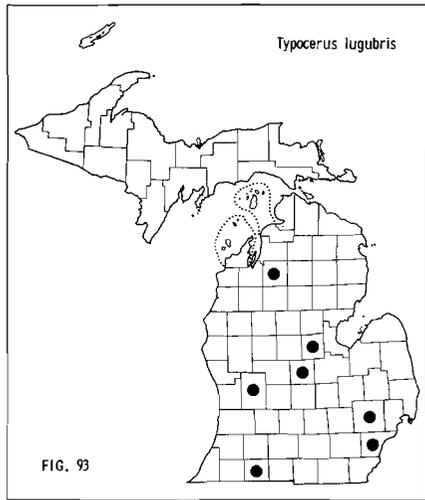
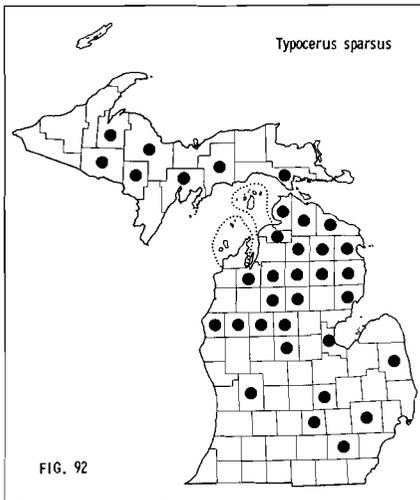
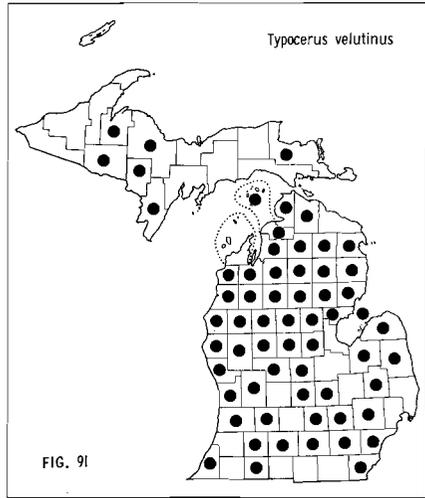
*acuticauda* Casey 1913. (Fig. 90) Late June to early August. The host plant has not been recorded. Adults are attracted to flowers.

*zebra* (Olivier) 1795. This species was recorded by Hatch (1924) from Charlevoix County, but his specimens are *sparsus* (UMMZ). We do not believe this species occurs in Michigan.

*velutinus* (Olivier) 1795. (Fig. 91) Late May to early September. Larvae feed in decaying hardwoods and conifers, and adults are abundant on a great variety of flowers.

*sparsus* LeConte 1878. (Fig. 92) Late June to mid-August. This species breeds in decaying pine, and adults are collected from flowers.

*lugubris* (Say) 1824. (Fig. 93) Late June to mid-July. We have found adults locally frequent on flowers of New Jersey-tea in St. Joseph County. This species has been recorded breeding in pine stumps.



Genus NEOALOSTERNA Podany

*capitata* (Newman) 1841. (Fig. 94) Early June to early July. We have found adults to be common on the flowers of alternate-leaf dogwood in the western Upper Peninsula. The host plants are not known.

Genus PSEUDOSTRANGALIA Swaine and Hopping

*cruentata* (Haldeman) 1847. (Fig. 95) Late June. Adults are attracted to flowers.

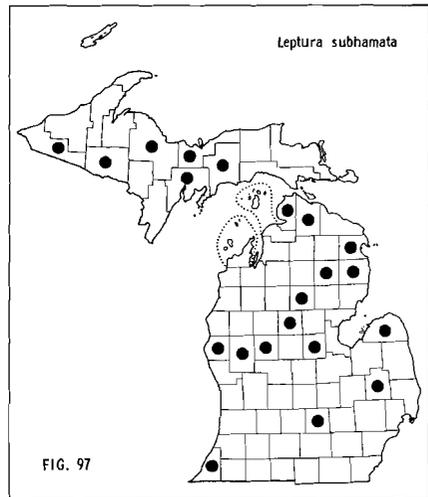
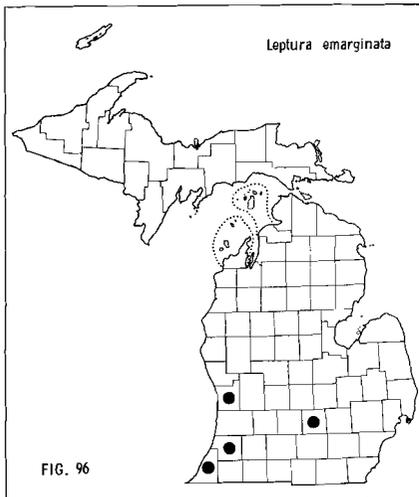
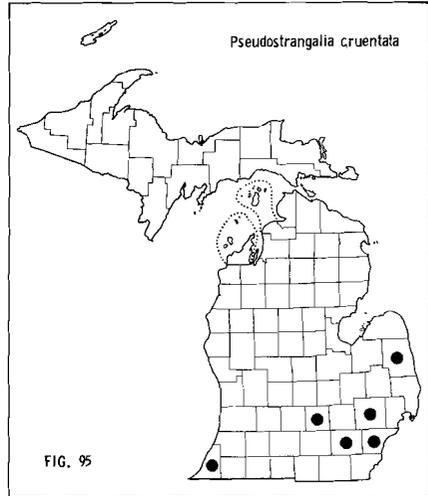
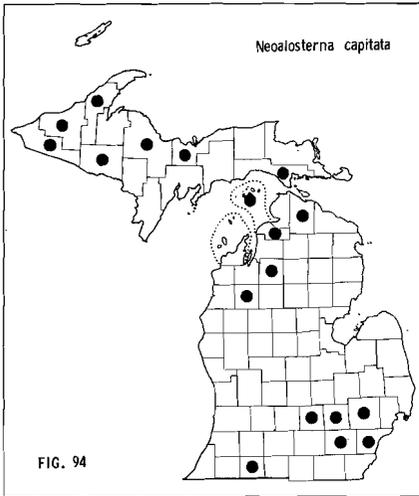
Genus *LEPTURA* Linnaeus

*emarginata* Fabricius 1787. (Fig. 96) July to late August. Larvae feed in decaying hardwoods. The handsome adults are rarely collected in Michigan.

*subhamata* Randall 1838. (Fig. 97) Early June through July. This species breeds in decayed conifers and the adults are attracted to flowers. Gardiner (1970) recorded collecting adults from freshly split pine and birch.

*plebeja* Randall 1838. (Fig. 98) Late June to early August. Adults are attracted to flowers. Perry (1975) has reared *plebeja* from pine.

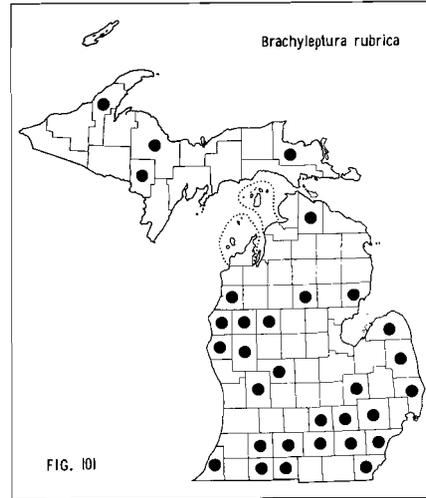
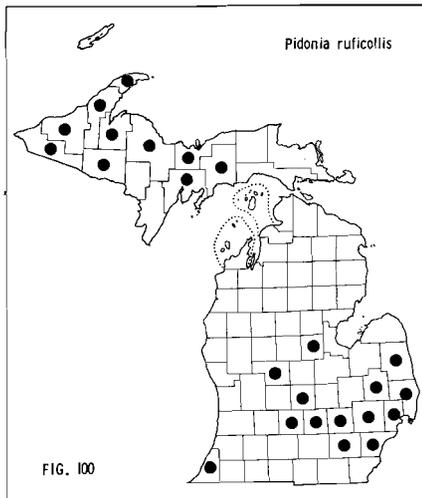
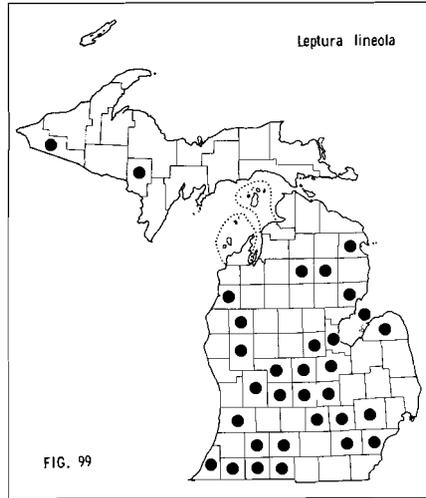
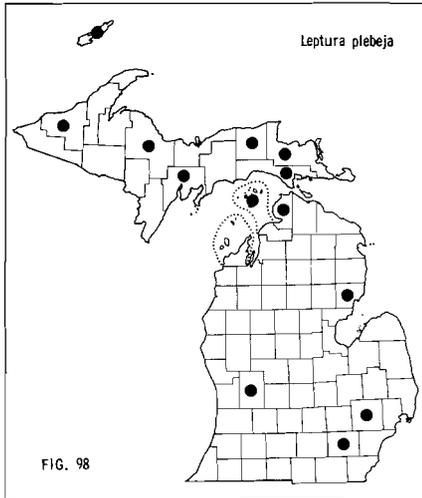
*abdominalis* Haldeman 1847. Swaine and Hopping (1928) recorded this species from Michigan. It breeds in juniper and is very rarely collected.



*lineola* Say 1824. (Fig. 99) Late May to mid-August. The larvae feed in decayed hardwoods and Perry (1975) has recorded this species from pine. Adults are common on flowers.

Genus *PIDONIA* Mulsant

*ruficollis* (Say) 1824. (Fig. 100) Late May to mid-July. The host plant is not known, but Gardiner (1970) has suggested it is probably alder. We have found adults to be abundant on flowers of alternate-leaf dogwood and other shrubs in the Upper Peninsula. The melanic form of this species predominates in northern Michigan.



Genus BRACHYLEPTURA Casey

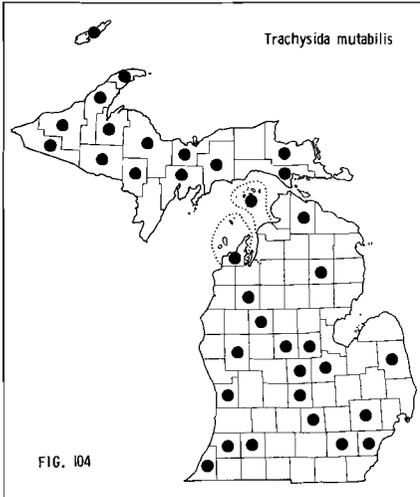
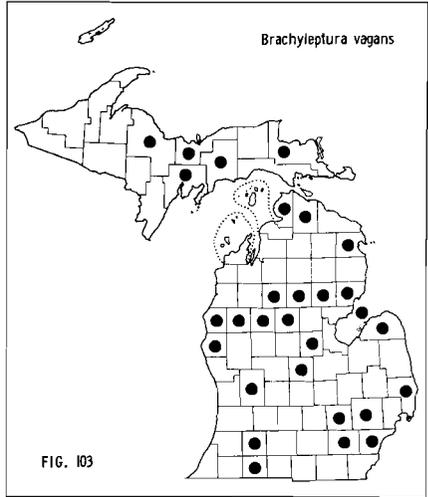
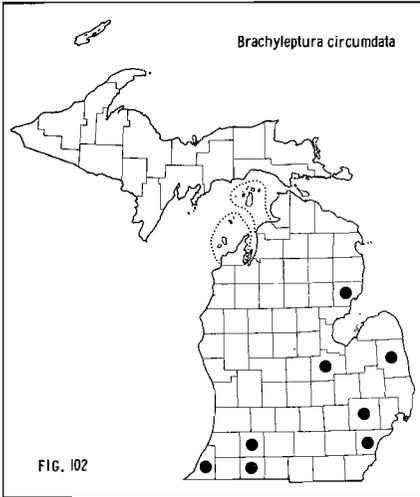
**rubrica** (Say) 1823. (Fig. 101) Mid-June to early August. Larvae feed in decayed hardwoods and conifers, and adults are attracted to a great variety of flowers.

**circumdata** (Olivier) 1795. (Fig. 102) Mid-June to mid-July. Host plant is not known. Adults are found on flowers.

**vagans** (Olivier) 1795. (Fig. 103) Early June to early August. Larvae feed in decayed hardwoods and pine, and adults are attracted to flowers.

Genus TRACHYSIDA Casey

**mutabilis** (Newman) 1841. (Fig. 104) Mid-June to late July. Larvae feed in decayed hardwoods. In the western Upper Peninsula adults are abundant on flowers of alternate-leaf dogwood and other shrubs.



*aspera* (LeConte) 1873. This species was recorded from Marquette, Sault Ste. Marie, and Detroit by Hubbard and Schwarz (1878). These records were probably the form later described as *Anoplodera brevifrons* Howden.

Genus **STRANGALEPTA** Casey

*pubera* (Say) 1827. (Fig. 105) Late May through July. Gardiner (1970) recorded black walnut (*Juglans nigra* L.) as a host plant, and Perry (1975) has reared it from pine. Adults are common on flowers in the Upper Peninsula.

*vittata* (Swederus) 1787. (Fig. 106) Mid-May to early August. Larvae feed in decayed hardwoods and conifers, and adults are common on flowers throughout the state.

Genus **ANASTRANGALIA** Casey

*sanguinea* (LeConte) 1859. (Fig. 107) Mid-June to mid-July. This species apparently breeds in decayed pine (Gardiner, 1970). Although a common lepturine in the western United States, it is rarely collected in Michigan, where adults are found on flowers.

Genus **XESTOLEPTURA** Casey

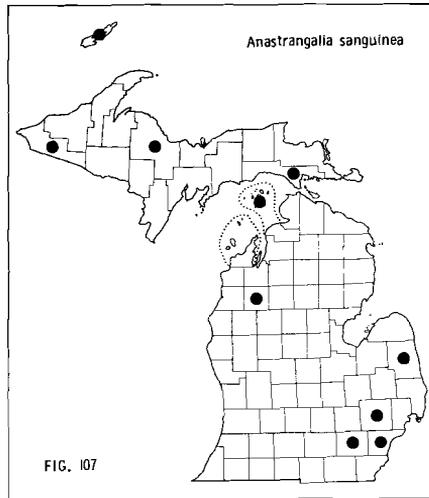
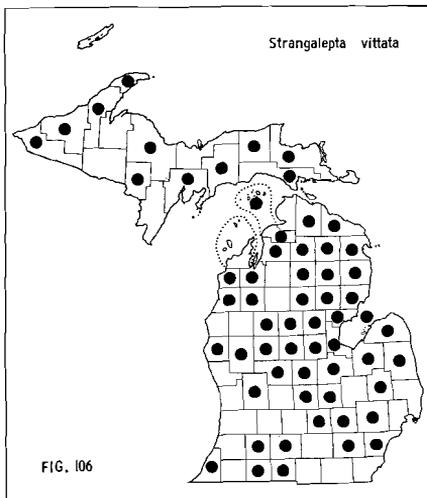
*octonotata* (Say) 1823. (Fig. 108) Mid-May to late June. Adults are attracted to flowers and have been recorded breeding in oak.

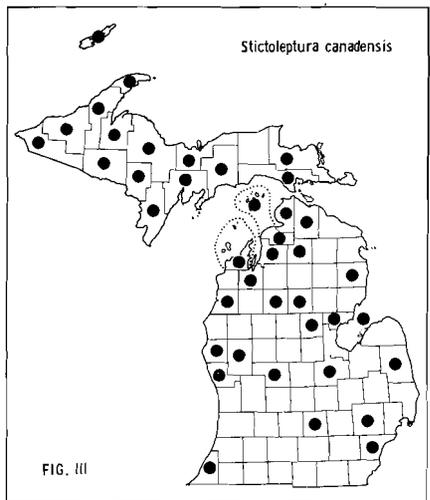
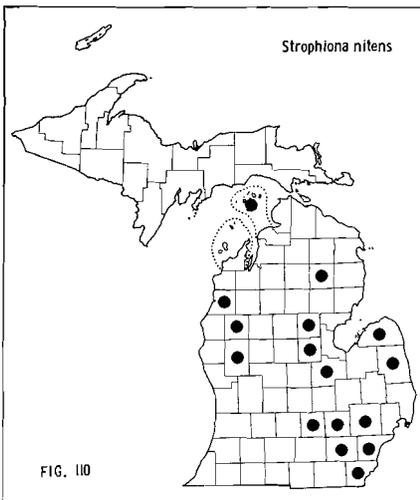
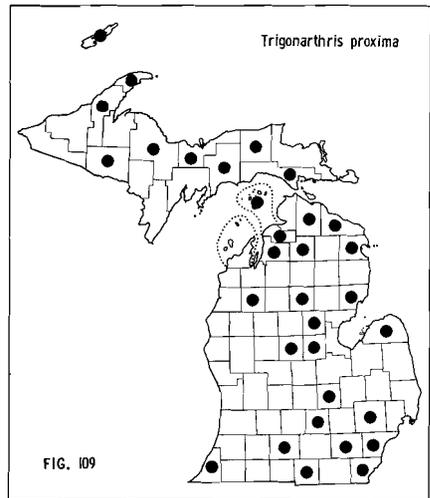
Genus **TRIGONARTHRS** Haldeman

*proxima* (Say) 1823. (Fig. 109) Early May to early August. Decayed sour-gum has been recorded as a host plant. Adults are found on a variety of flowers.

Genus **STROPHIONA** Casey

*nitens* (Forster) 1771. (Fig. 110) Mid-May to late July. Larvae bore under the bark of living oak and chestnut. Knull (1946) recorded rearing *nitens* from a decayed stump of sugar maple (*Acer saccharum* Marsh.). Adults are attracted to flowers.





#### Genus *STICTOLEPTURA* Casey

*canadensis* (Olivier) 1795. (Fig. 111) Late May to late August. Larvae feed in decayed conifers, and Gardiner (1970) recorded oviposition on decayed hardwoods. Adults are often common on flowers.

#### Genus *ANOPLODERA* Mulsant

*nigrella* (Say) 1826. (Fig. 112) Early June to early August. Larvae feed in the decayed heartwood of pine (Gardiner, 1970).

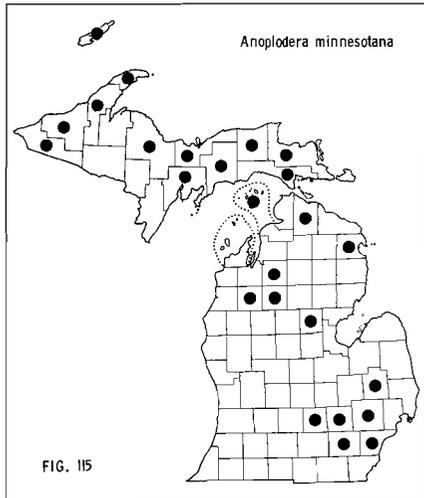
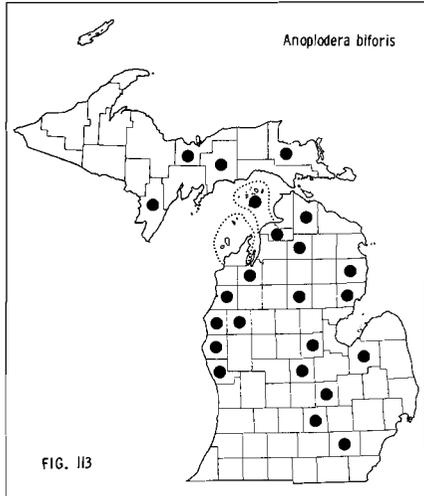
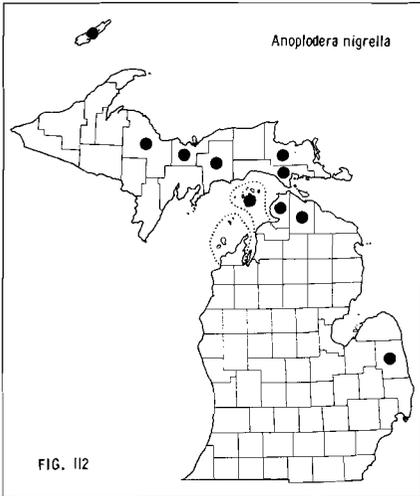
*biforis* (Newman) 1841. (Fig. 113) Late June to mid-August. This species has been recorded as breeding in decayed chestnut and hemlock.

*brevifrons* Howden 1959. The records for *Trachysida aspera* (LeConte) noted above presumably refer to this species. A single specimen was collected in Ontonagon County on 18 June from flowers of alternate-leaf dogwood by E. F. Giesbert (personal communication). Larvae feed in decayed conifers.

*tibialis* (LeConte) 1850. (Fig. 114) July. Gardiner (1970) recorded oviposition on decayed pine. Adults are attracted to flowers.

*minnesotana* (Casey) 1913. (Fig. 115) Mid-June to early August. Larvae feed in decayed hardwoods, and have also been reared from pine (Perry, 1975). Adults frequent a variety of flowers.

*chrysocoma* (Kirby) 1837. (Fig. 116) Mid-June to early August. Larvae feed in decayed conifers, and adults are often common on flowers.



## Subfamily LAMIINAE

The North American Lamiinae are currently under revision by E. G. Linsley and J. A. Chemsak of the University of California. At this time there is no satisfactory key to adult Lamiinae found in Michigan. A key to the genera is available in Arnett (1968). References to keys to species are listed below for those genera represented in this list by more than one species.

*Goes*: Dillon and Dillon, 1941.

*Monochamus*: Dillon and Dillon, 1941.

*Dorcaschema*: Dillon and Dillon, 1948.

*Eupogonius*: Knull, 1946.

*Pogonocherus*: Knull, 1946.

*Neacanthocinus*: Dillon, 1956.

*Graphisurus*: Dillon, 1956.

*Amniscus*: Dillon, 1956.

*Lepturges*: Dillon, 1956.

*Urgleptes*: Dillon, 1956.

*Hyperplatys*: Dillon, 1956.

*Saperda*: Knull, 1946.

*Oberaea*: no satisfactory key.

*Tetraopes*: Chemsak, 1963.

## Genus PLECTRODERA LeConte

*scalator* (Fabricius) 1792. (Fig. 117) Early July to early September. Larvae feed in the bases of living cottonwood (*Populus deltoides* Marsh.). Adults may be collected from the foliage of host plants.

## Genus GOES LeConte

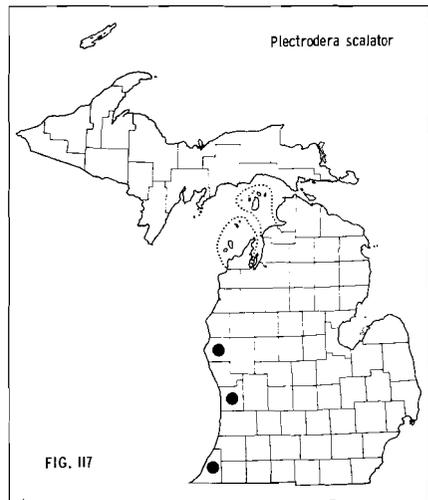
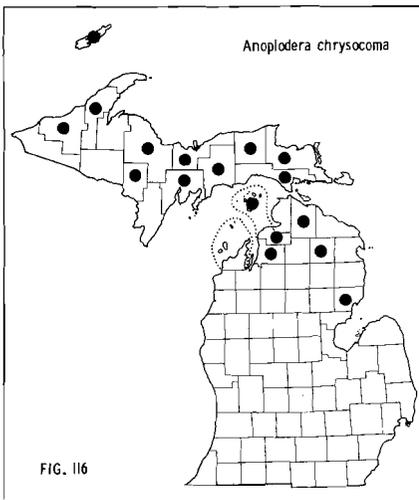
*debilis* LeConte 1852. (Fig. 118) Late June through July. Larvae bore in living branches of oak. We have collected adults at light and by beating foliage of host trees.

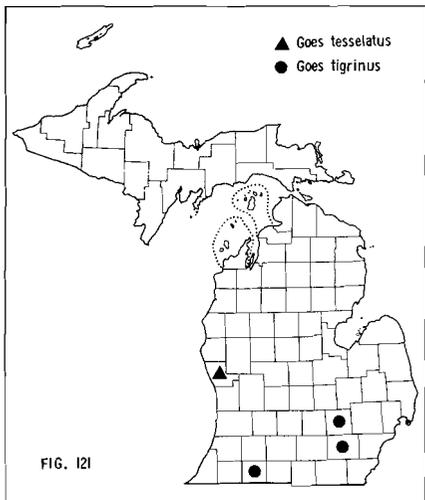
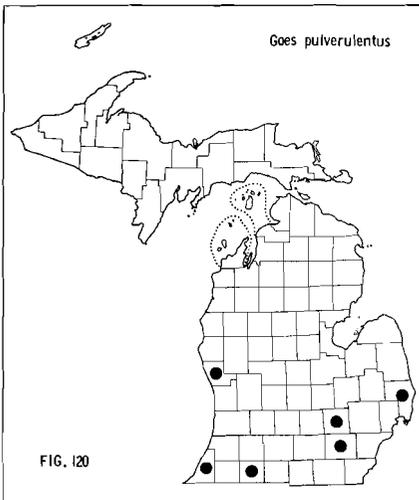
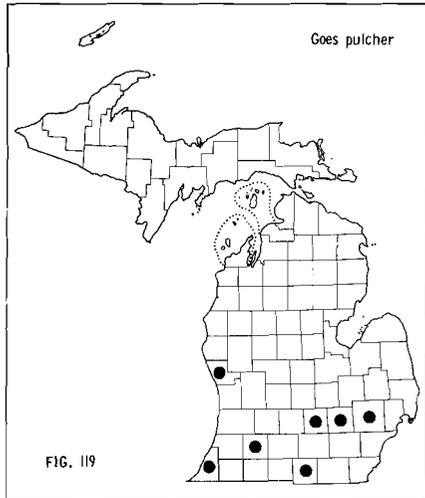
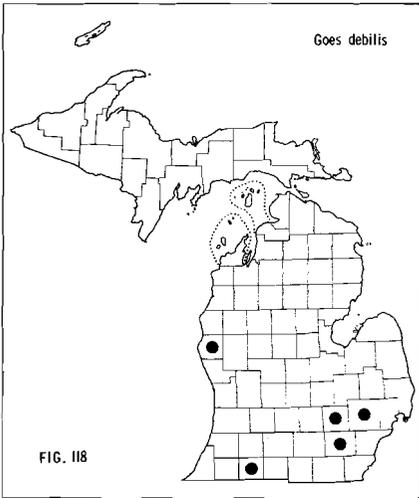
*pulcher* (Haldeman) 1847. (Fig. 119) Late June through July. Larvae bore in living hickory and oak, and adults may be found on the foliage of host trees.

*pulverulentus* (Haldeman) 1847. (Fig. 120) July. Larvae bore in living hardwoods. Perry (1975) reported rearing this species from pine. We have collected adults at light.

*tesselatus* (Haldeman) 1847. (Fig. 121) This species was collected in Muskegon County on 1 August by E. Liljebld. Larvae bore in living oak and other hardwoods.

*tigrinus* (DeGeer) 1775. (Fig. 121) Late July to early August. Larvae bore in living oak.





Genus MICROGOES Casey

*oculatus* (LeConte) 1862. (Fig. 122) Mid-June to early August. Larvae bore in dead hardwoods. Perry (1975) recorded rearing this species from pine.

Genus CACOPLIA LeConte

*nebulosa* (Haldeman) 1847. (Fig. 123) Mid-June through July. Dillon and Dillon (1941) recorded collecting this species by beating oak, and we have collected adults at light.

Genus MONOCHAMUS Guerin

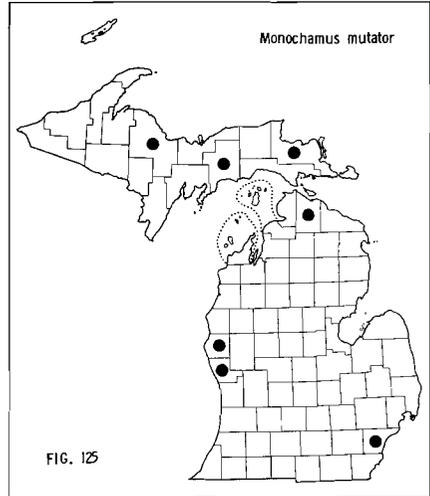
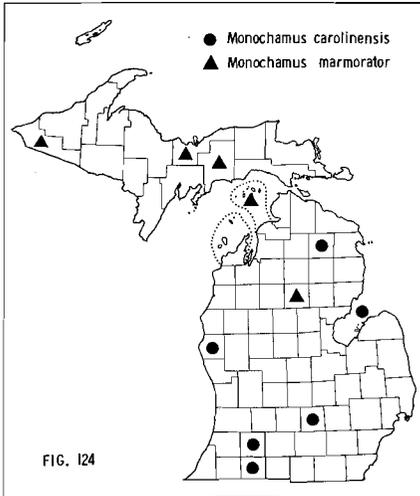
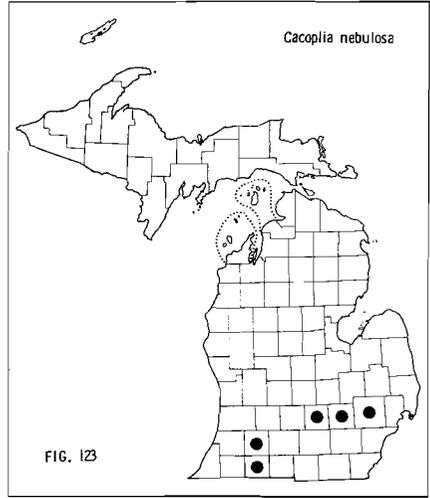
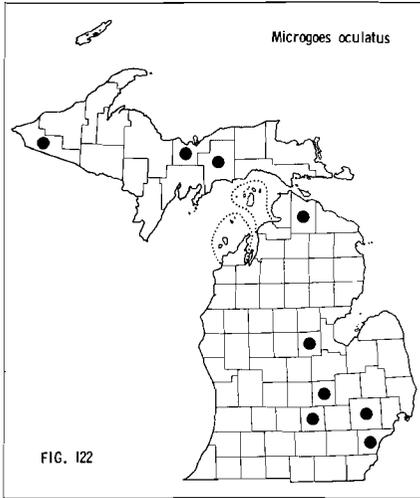
Six species of *Monochamus* are known to occur in Michigan, all having similar habits. Larvae feed in recently dead or dying pine, spruce, fir, and larch, and adults have been recorded feeding on the needles and bark of small twigs. One species, *marmorator*, has also been recorded ovipositing in living trees. Adults are probably best collected on recently dead pine logs.

*carolinensis* (Oliver) 1790. (Fig. 124) Mid-June to mid-August.

*marmorator* Kirby 1837. (Fig. 124) Mid-June to early August.

*mutator* LeConte 1850. (Fig. 125) Early July to mid-September.

*notatus* (Drury) 1773. (Fig. 126) Late June to mid-September.



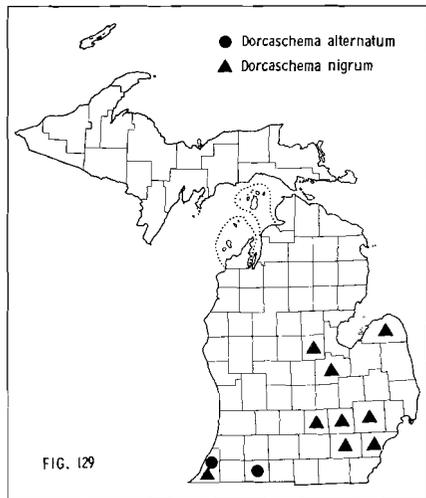
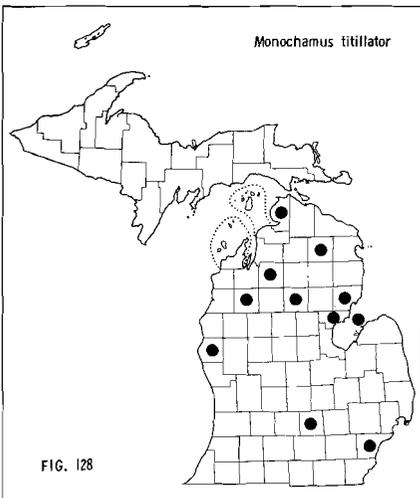
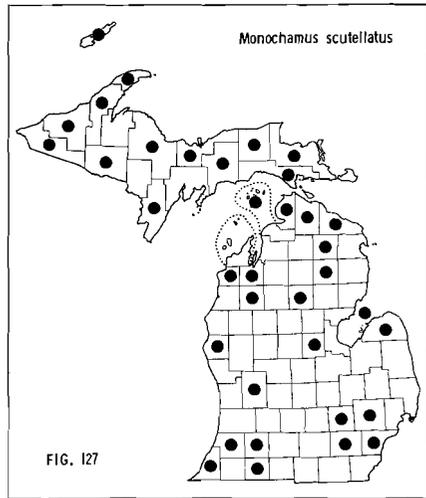
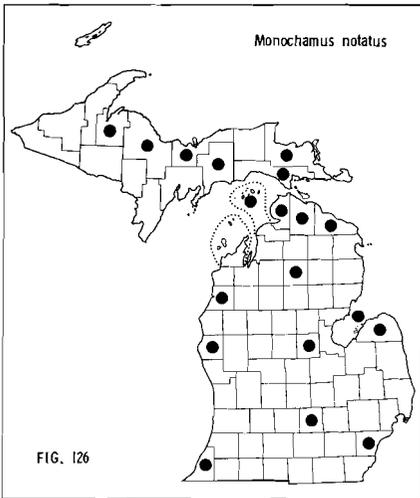
*scutellatus* (Say) 1824. (Fig. 127) Late May to late September.

*titillator* (Fabricius) 1775. (Fig. 128) Mid-June to mid-August.

Genus **DORCASHEMA** LeConte

*alternatum* (Say) 1823. (Fig. 129) Late June to mid-July. Larvae feed in dead or dying branches of osage-orange [*Maclura pomifera* (Raf.) Schneid.] and white mulberry (*Morus alba* L.), and adults can be collected by beating the foliage of adjacent living branches.

*nigrum* (Say) 1827. (Fig. 129) Late May through June. Larvae feed in dead hickory branches, and adults may be collected from the foliage of host trees.



Genus **HETOEMIS** Haldeman

**cinerea** (Olivier) 1795. (Fig. 130) Late May to early August. Larvae feed in dead hardwoods, especially mulberry, and adults can be beaten from the foliage of host trees.

Genus **ESTHLOGENA** Thomson

**brunnea** (Champlain and Knull) 1926. Collected in Kalamazoo County on 7 July by R. W. Hodges.

Genus **EUPOGONIUS** LeConte

**pubescens** LeConte 1873. (Fig. 131) June to early July. Linden (*Tilia americana* L.) has been recorded as a host plant for this species.

**tomentosus** (Haldeman) 1847. (Fig. 131) July. This species has been recorded breeding in dead pine and spruce.

**vestitus** (Say) 1827. (Fig. 132) Late June to early August. Larvae feed in dead branches of hardwoods. We have collected adults by beating dead and dying branches, sumac being most productive.

**subarmatus** (LeConte) 1859. (Fig. 133) Late May to late July. Larvae have been recorded from dead linden, and adults may be collected from foliage of the host tree.

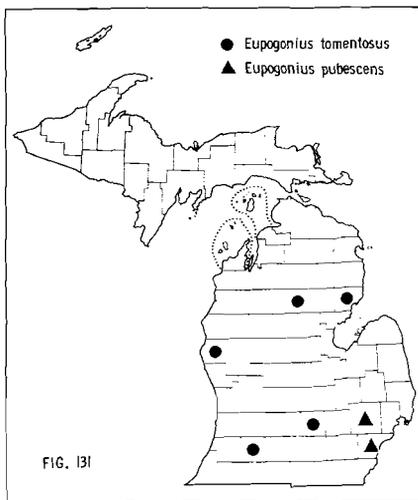
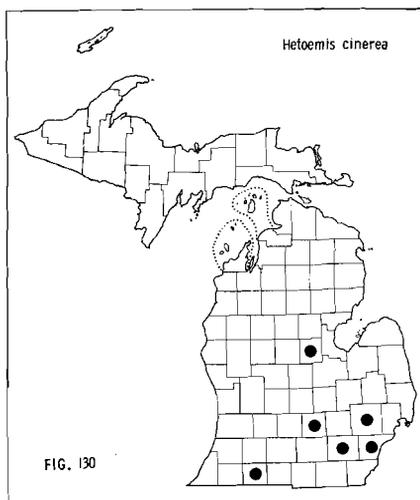
Genus **PSENOCERUS** LeConte

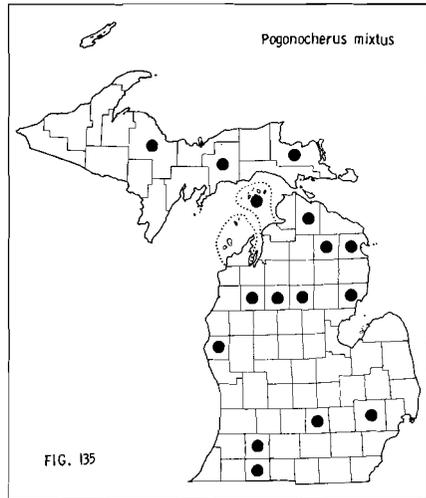
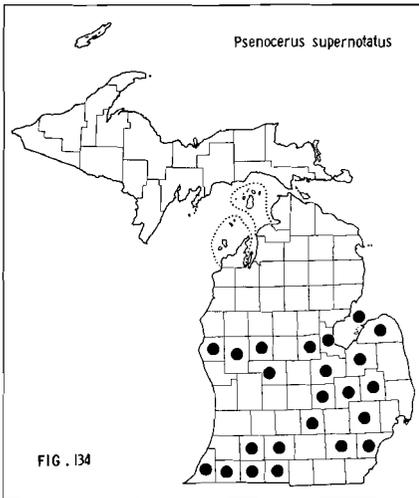
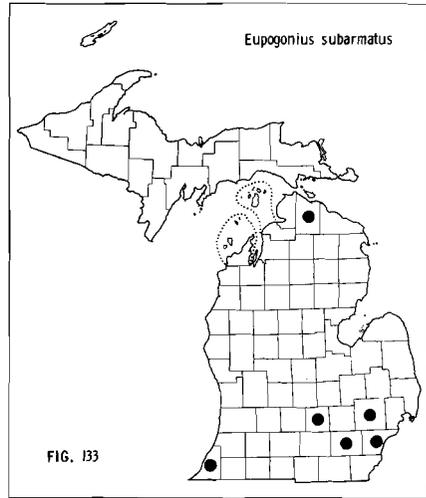
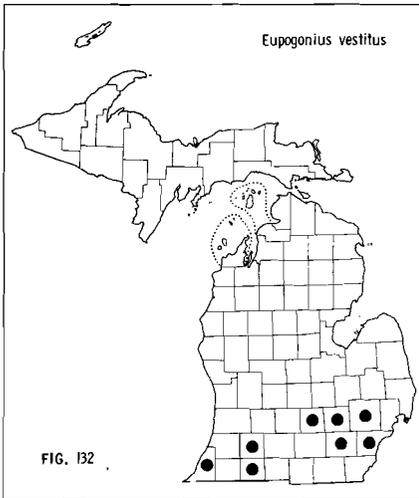
**supernotatus** (Say) 1823. (Fig. 134) May through July. Larvae feed in dead hardwoods, and adults can be collected by beating dead or dying branches. We have found it rather common on dying sumac.

Genus **POGONOCHERUS** Zetterstedt

**penicillatus** LeConte 1850. This species was collected by A. W. Andrews in Chippewa County on 21 July. It breeds in spruce.

**mixtus** Haldeman 1847. (Fig. 135) Late May to early September. Larvae feed in dead branches of conifers.





*parvulus* LeConte 1852. This species was collected in Oakland County on 15 June by A. W. Andrews, and at the E. S. George Reserve in Livingston County on 14 June by the senior author. It has been recorded breeding in dead branches of willow.

#### Genus ECYRUS LeConte

*dasycerus* (Say) 1827. (Fig. 136) Late June through August. Larvae feed in dead branches of hardwoods. Adults are attracted to light.

#### Genus HOPLOSIA Mulsant

*nubila* (LeConte) 1862. (Fig. 137) Late May to mid-July. Larvae have been recorded feeding in decayed linden.

Genus ONCIDERES Serville

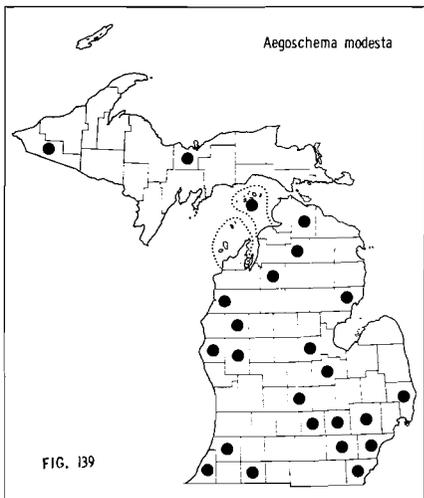
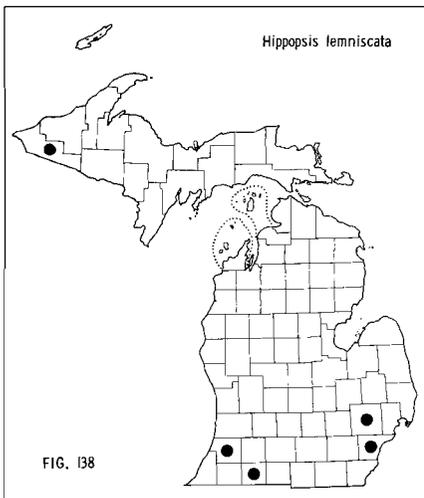
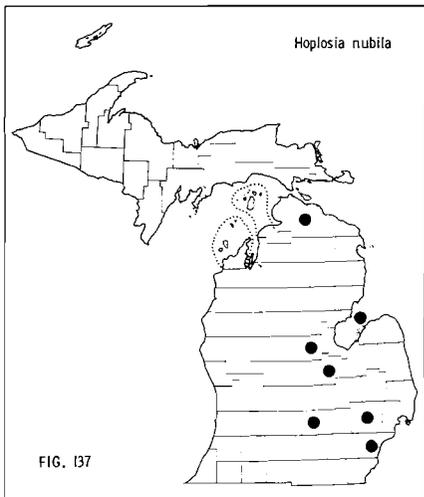
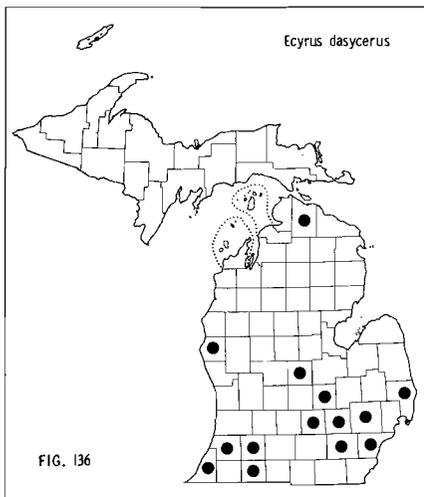
*cingulata* (Say) 1826. This species was collected in Wayne County on 6 September by A. W. Andrews. Adults girdle living branches of hickory and other hardwoods.

Genus HIPPOPSIS Serville

*lemniscata* (Fabricius) 1801. (Fig. 138) Late May to mid-August. Larvae bore in the living stems of ragweed (*Ambrosia* spp.) and pupate in the base of the infested plant.

Genus AEGOSHEMA Aurivillius

*modesta* (Gyllenhal) 1817. (Fig. 139) Late May to early August. Larvae feed in dead hardwoods, and Perry (1975) recorded rearing this species from pine. We have



collected adults at night from recently dead oak and ironwood (*Carpinus caroliniana* Walt.) and at light.

#### Genus NEACANTHOCINUS Dillon

*obsoletus* (Olivier) 1795. (Fig. 140) July. Larvae feed within the bark of recently dead pine.

*pusillus* (Kirby) 1837. (Fig. 140) Mid-June through July. Habits are similar to *obsoletus*.

#### Genus GRAPHISURUS Kirby

*fasciatus* (DeGeer) 1775. (Fig. 141) Early May through July. Larvae feed in dead oak and other hardwoods. Perry (1975) recorded rearing *fasciatus* from pine, and we have reared it from white pine (*Pinus strobus* L.) from Alger County. This is one of the most common laminae in the oak-hickory woodlands of southern Michigan. Adults can be collected at light or from the bark of recently dead oak.

*despectus* (DeGeer) 1775. (Fig. 142) Mid-May through July. This species has similar habits to *fasciatus* and can be collected in the same manner, although it is not found as frequently.

#### Genus ASTYLIDIUS Casey

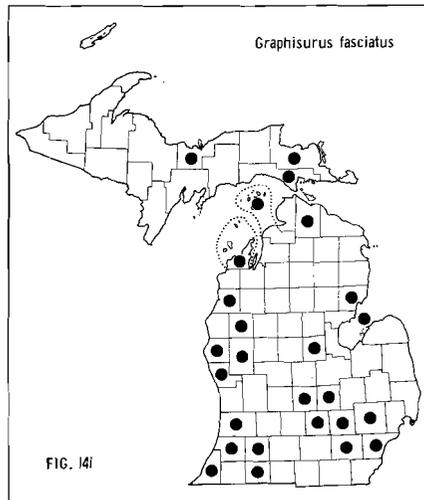
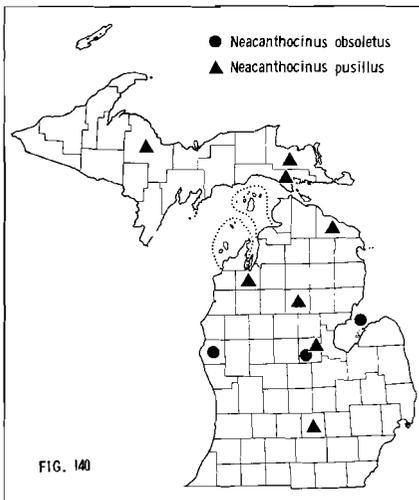
*versutus downiei* Dillon 1956. An unpublished record of *A. parvus* from Oakland County on 5 August by A. W. Andrews probably refers to this species. We have not located the specimen for examination, but the species occurs in Indiana and might well be found in southern Michigan.

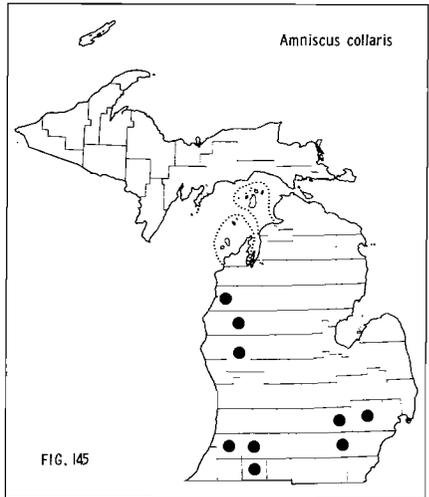
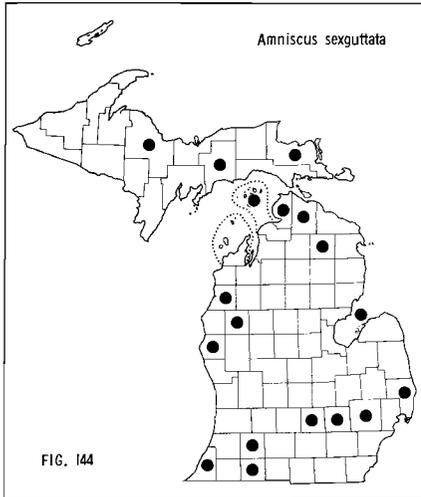
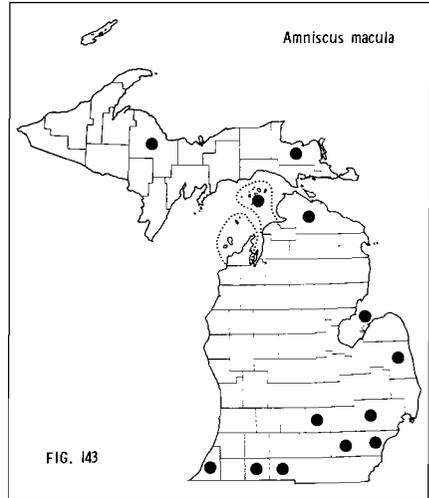
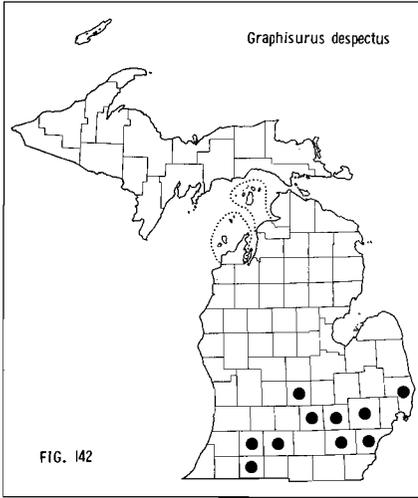
#### Genus AMNISCUS Haldeman

*macula* (Say) 1827. (Fig. 143) Late June to early August. Larvae feed in or under the bark of dead hardwoods. In St. Joseph County we have most often collected adults at night on the bark of recently dead ironwood.

*sexguttata* (Say) 1827. (Fig. 144) July. Larvae feed under the bark of dead conifers. Adults can be collected at light.

*collaris* Haldeman 1847. (Fig. 145) Late June to mid-August. Larvae feed in dead oak and other hardwoods. Adults are attracted to light.





Genus **LEPTOSTYLUS** LeConte

**transversus** (Gyllenhal) 1817. (Fig. 146) Late May to early August. We have collected adults at light and from the bark of recently dead hickory and ironwood at night.

Genus **STERNIDIUS** LeConte

**alpha** (Say) 1827. (Fig. 147) Mid-May to late August. Larvae feed in small dead branches of hardwoods. Adults are collected at light and by beating dead branches of host plants. In St. Joseph County we have found *alpha* most common on dead sumac.

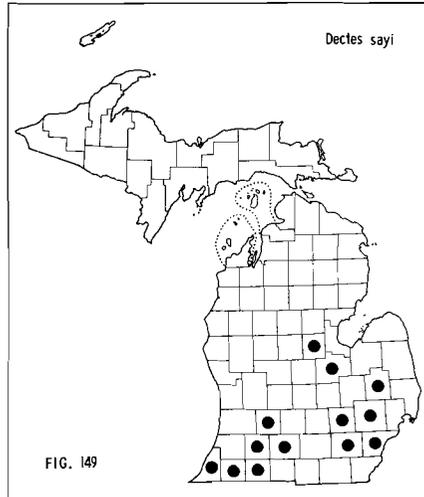
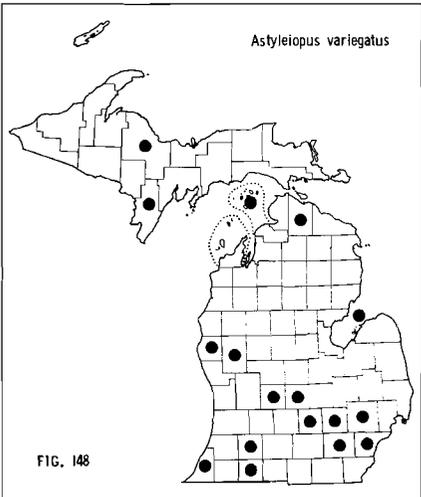
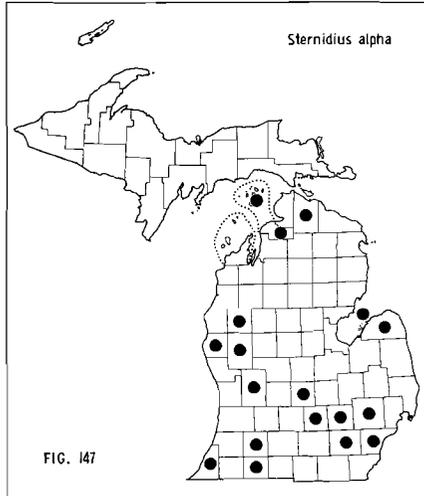
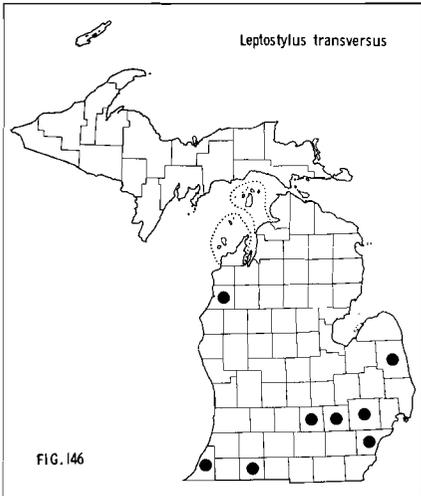
Genus *ASTYLEIOPUS* Dillon

*variegatus* (Haldeman) 1847. (Fig. 148) Late June to early August. Larvae feed in dead branches of hardwoods. Adults are collected at light.

Genus *DECTES* LeConte

*sayi* Dillon and Dillon 1953. (Fig. 149) Late May to mid-August. Larvae feed in living stems of ragweed and other forbs. Adults may be collected by beating host plants.

*texanus* LeConte 1862. (Fig. 150) July through August. Habits of this species are believed similar to *sayi*.



## Genus LEPTURGES Bates

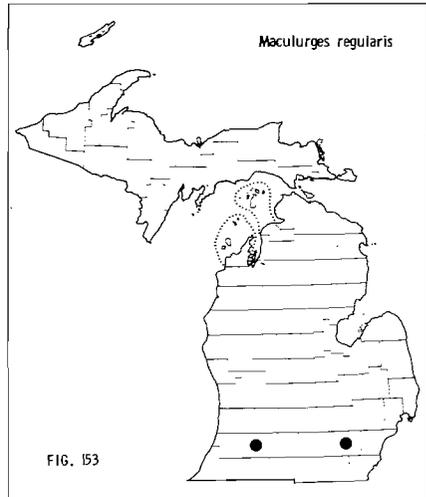
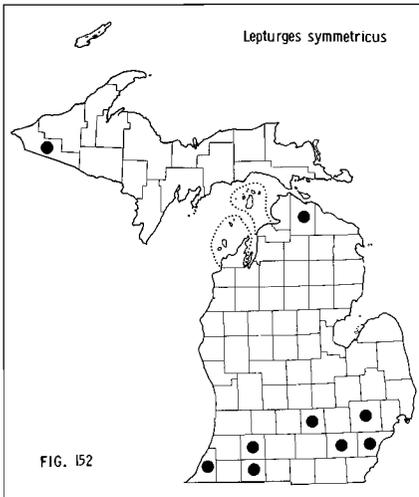
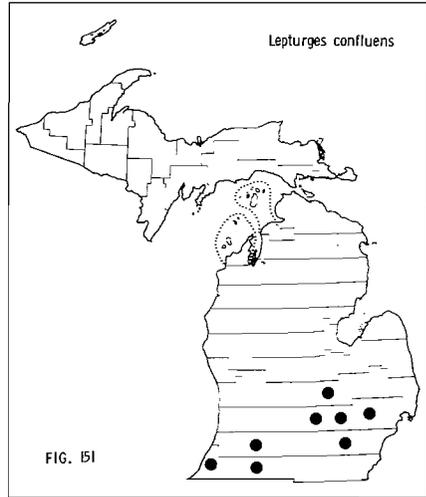
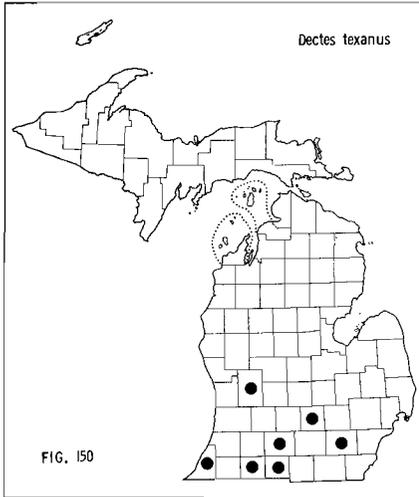
**confluens** (Haldeman) 1847. (Fig. 151) Mid-June through August. Larvae feed in dead hardwoods. Adults can be collected at light and from the bark of recently dead oak and other hardwoods at night.

**angulatus** (LeConte) 1852. We collected a single specimen in St. Joseph County on 9 July, at night, from the bark of recently dead oak.

**symmetricus** (Haldeman) 1847. (Fig. 152) Early June to early August. Larvae feed in the branches of dead hardwoods. Adults are attracted to light.

## Genus MACULURGES Dillon

**regularis** (LeConte) 1852. (Fig. 153) Early July. Recorded as breeding in dead branches of buckeye (*Aesculus glabra* Willd.).

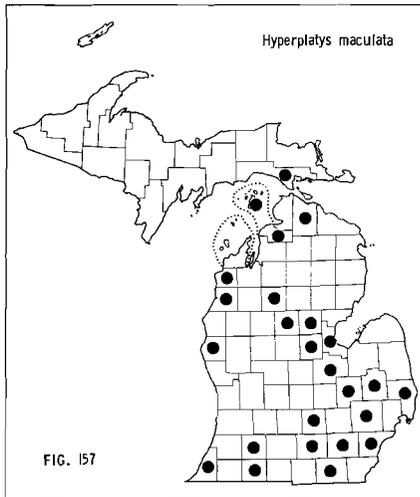
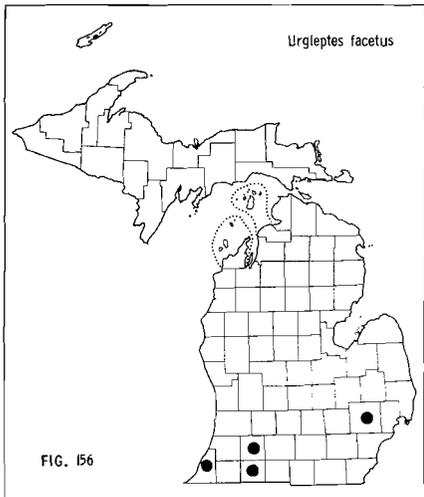
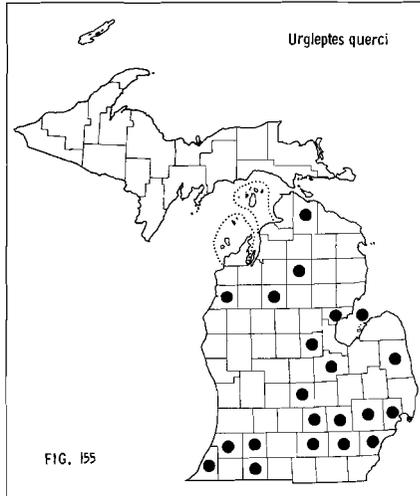
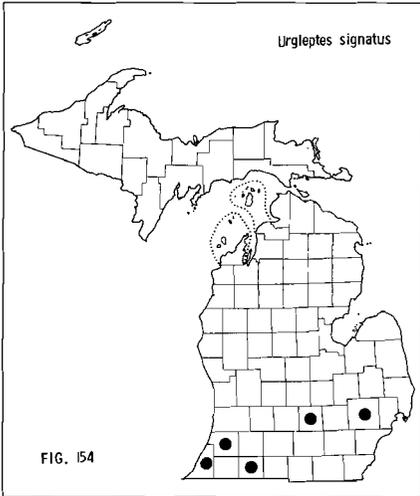


Genus **URGLEPTES** Dillon

**signatus** (LeConte) 1852. (Fig. 154) Late June to mid-August. Larvae feed in small dead branches of hardwoods. Adults can be collected at light, from the bark of recently dead branches at night, and by beating dead branches both at night and during the day.

**querci** (Fitch) 1858. (Fig. 155) Early May to mid-August. Habits of this species are similar to *signatus* and it can be collected in the same manner.

**facetus** (Say) 1826. (Fig. 156) June to mid-August. Habits of this species are similar to the two preceding ones, but it is much less frequently collected. We have taken it by beating dead sumac.



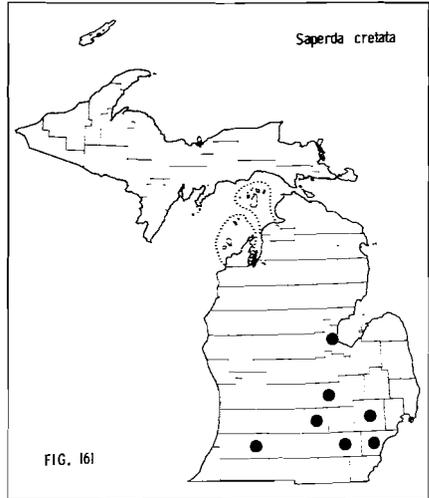
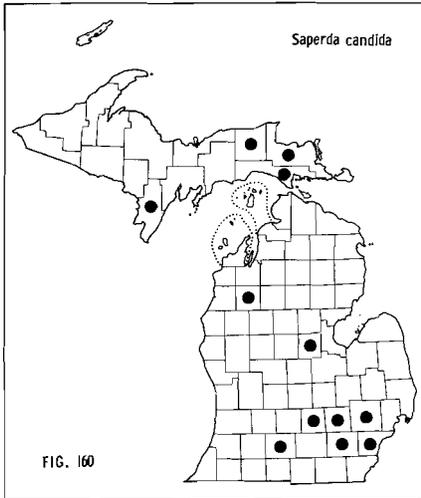
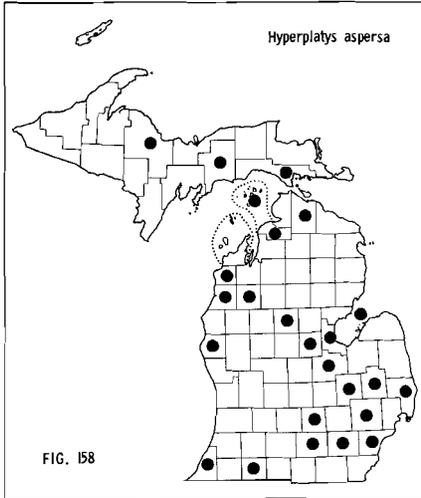
Genus *HYPERPLATYS* Haldeman

*maculata* Haldeman 1847. (Fig. 157) June to late August. This species has been recorded breeding in dead willow branches, and undoubtedly attacks other hardwoods. We have found adults to be common at night on the bark of recently dead ironwood.

*aspersa* (Say) 1823. (Fig. 158) Late May through August. Larvae feed beneath the bark of dead hardwoods. We have collected adults by beating dead sumac.

Genus *SAPERDA* Fabricius

*calcarata* Say 1823. (Fig. 159) Late June to early September. Larvae feed in the trunks of living aspen and willow, causing severe damage. Adults are attracted to light.



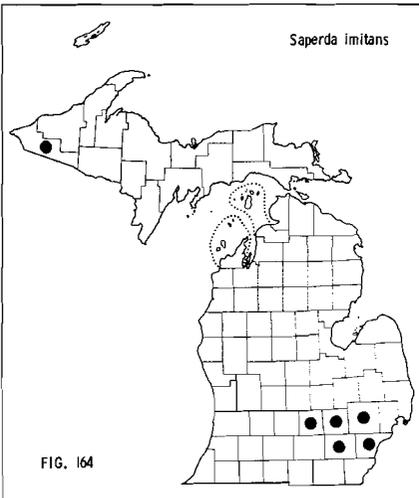
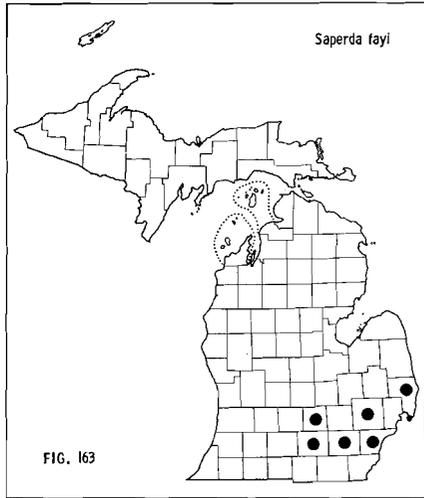
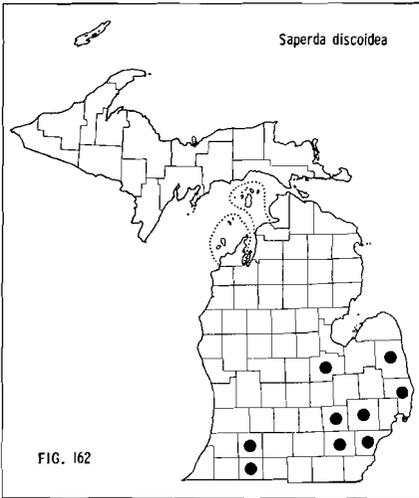
*candida* Fabricius 1787. (Fig. 160) Mid-June through August. This species attacks living apple, quince, hawthorn, Juneberry, and chokeberry. Larvae feed in the base of infested trees.

*cretata* Newman 1838. (Fig. 161) Late May to mid-August. This species also attacks living apple, hawthorn, and related trees.

*discoidea* Fabricius 1798. (Fig. 162) Late May through September. Larvae feed in dead or dying hickory. Adults can be collected at light or from the bark of recently dead hickory at night.

*fayi* Bland 1863. (Fig. 163) Late May to mid-July. Larvae feed in living branches of hawthorn.

*imitans* Felt and Joutel 1904. (Fig. 164) June and early July. Larvae feed in dead hardwoods.



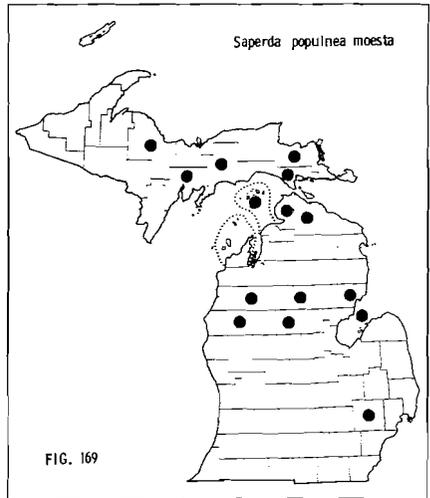
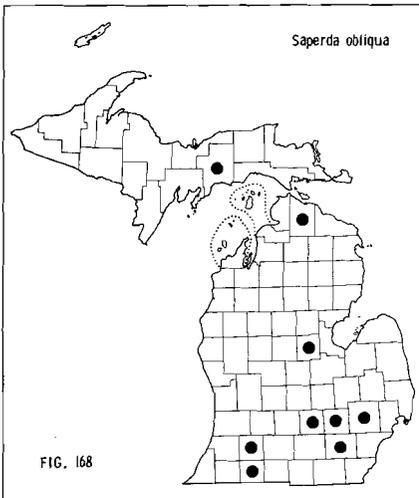
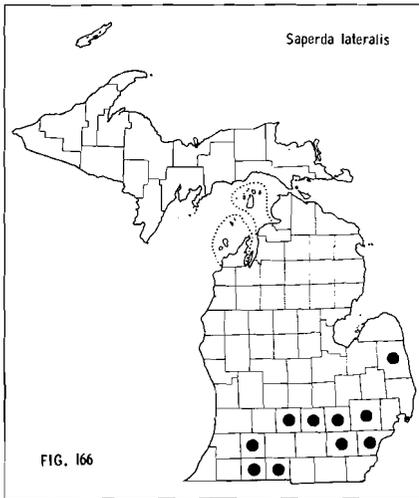
*inornata* Say 1823 (= *concolor* LeConte). (Fig. 165) June and July. This species attacks branches and stems of living aspen, poplar, and willow.

*lateralis* Fabricius 1775. (Fig. 166) May through July. Larvae feed in dead hardwoods, and adults are attracted to light. Perry (1975) has recorded rearing this species from pine.

*mutica* Say 1824. (Fig. 167) Mid-June through July. This species has been recorded as breeding in dead willow.

*obliqua* Say 1827. (Fig. 168) Late June to mid-August. Knull (1946) recorded this species breeding in the bases of living alder and birch, and noted finding adults on alder foliage. We have collected adults at light.

*populnea moesta* LeConte 1850. (Fig. 169) June and July. This species attacks branches of living aspen, poplar, and willow.



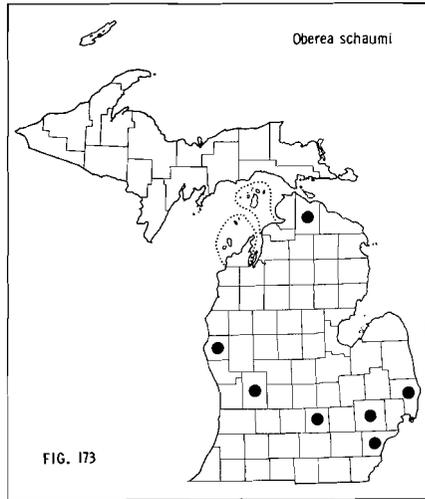
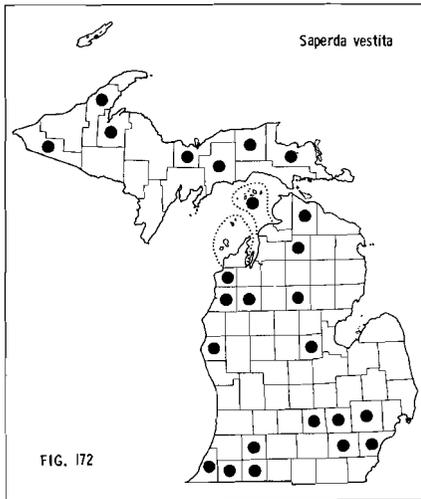
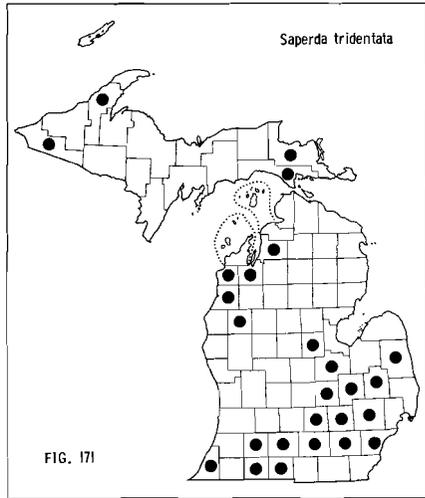
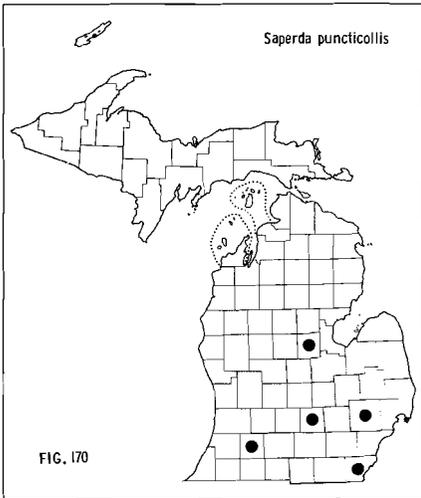
*puncticollis* Say 1824. (Fig. 170) Late May to early July. Larvae feed in dead and dying vines of Virginia creeper [*Parthenocissus quinquefolia* (L.) Planch.]. Adults have also been recorded from poison ivy (*Rhus radicans* L.).

*tridentata* Olivier 1795. (Fig. 171) Mid-May to mid-August. Larvae feed in dead and dying elm, and adults are frequently collected at light.

*vestita* Say 1824. (Fig. 172) Early May to mid-September. This species breeds in dead linden, and has been recorded attacking living trees. Adults are attracted to light.

Genus *OBEREA* Mulsant

*schaumi* LeConte 1852. (Fig. 173) Mid-June to mid-July. Adults girdle living branches of poplar.



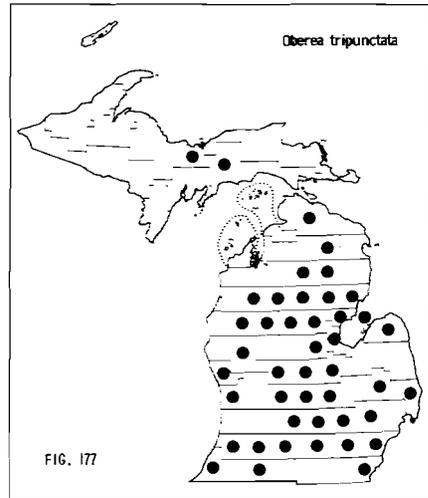
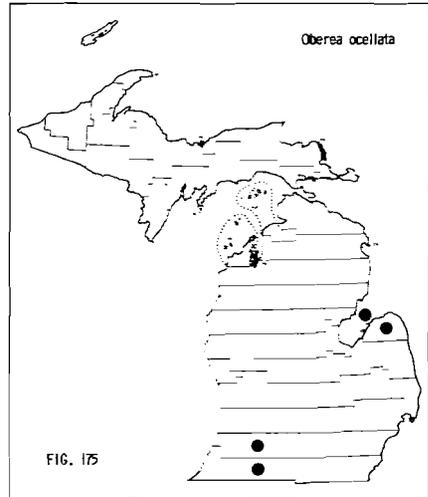
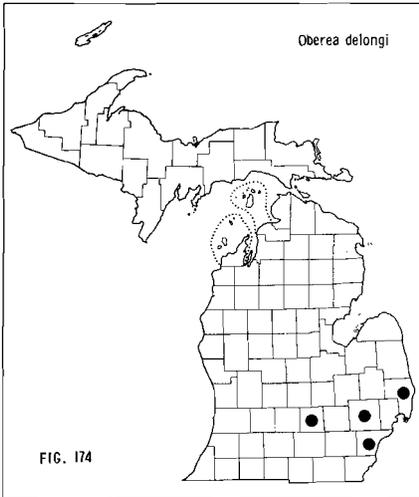
**delongi** Knull 1928. (Fig. 174) Mid-June through July. This species attacks cottonwood and poplar.

**ocellata** Haldeman 1847. (Fig. 175) Mid-June to mid-July. Adults girdle living branches of sumac.

**ruficollis** (Fabricius) 1792. (Fig. 176) Late June to early August. This species attacks living sassafras [*Sassafras albidum* (Nutt.) Nees.] girdling small stems.

**tripunctata** (Swederus) 1787. (Fig. 177) Late May to early August. Larvae feed in the living branches of hardwoods.

**bimaculata** (Olivier) 1795. (Fig. 178) Late May to early August. This species attacks living stems of blackberry and raspberry.

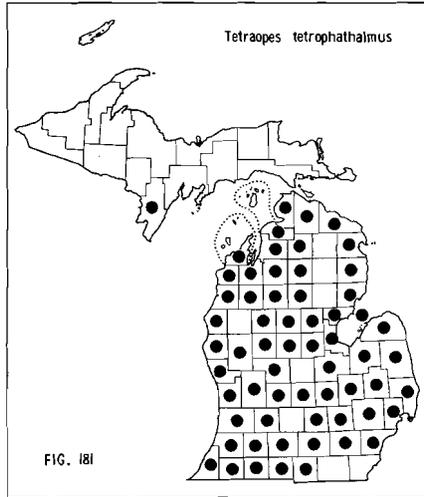
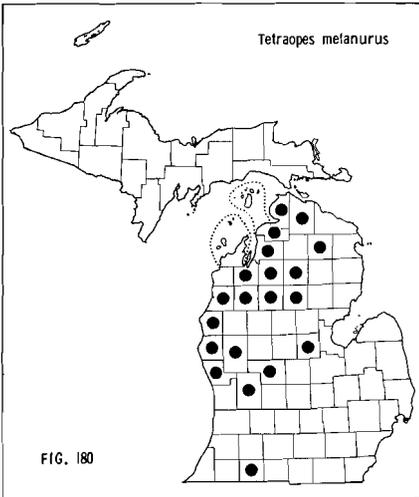
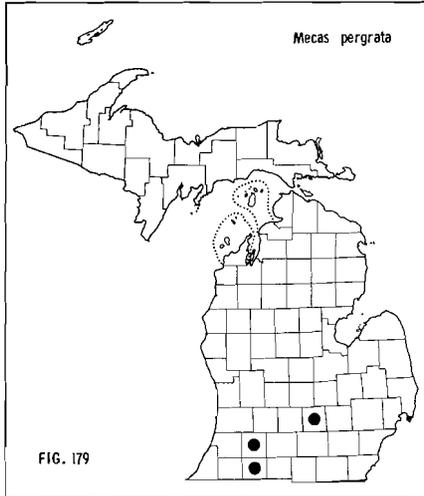
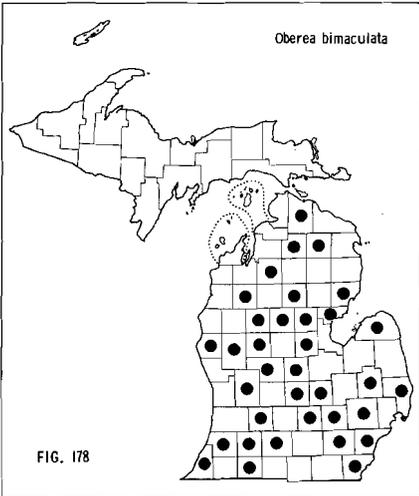


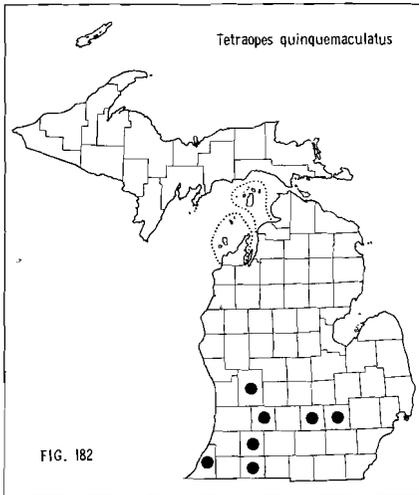
Genus MECAS LeConte

*pergrata* (Say) 1824. (Fig. 179) June. Larvae feed in the living stems of wild asters. Adults may be swept from the foliage of host plants.

Genus TETRAOPES Schönerr

Four species of *Tetraopes* are known to occur in Michigan, all feeding on milkweeds as larvae and also as adults. Adults of all four species have been collected from common milkweed (*Asclepias syriaca* L.), but we have found *quinquemaculata* more frequently on butterfly-weed (*A. tuberosa* L.).





*melanurus* Schönerr 1817. (Fig. 180) Early June to mid-September. This species seems locally common in the northern Lower Peninsula, but is rarely collected in the southern part of the state.

*tetrophthalmus* (Forster) 1771. (Fig. 181) Early June to early September. Common throughout the Lower Peninsula.

*quinquemaculatus* Haldeman 1847. (Fig. 182) Mid-June to late September.

*femoratus* LeConte 1847. (Fig. 183) Mid-July to mid-September. This species is found together with *tetrophthalmus* but only infrequently and in localized populations.

This list records 225 species of Cerambycidae from Michigan, and we believe it is nearly complete for the state. We are aware that other species will be added by continued collecting, such as *Tragidion coquus* (Linnaeus) which occurs in northern Indiana and almost certainly in southern Michigan as well. We are also aware of the great deficiencies in our knowledge of the life history of many species, and hope future investigations will add more of this much-needed information.

#### ACKNOWLEDGMENTS

Such an extensive list as this is possible only because of the labors of many individuals who have collected Cerambycidae throughout Michigan over the past century, and we recognize the debt we owe these workers. A. W. Andrews must be ranked preeminent among cerambycid collectors in the state, but others such as S. Moore, E. Liljebblad, and R. R. Dreisbach have also made large contributions to the museum collections of the University of Michigan and Michigan State University. For access to these collections we thank Dr. T. H. Hubbell and Dr. I. J. Cantrall, University of Michigan Museum of Zoology, and Dr. R. L. Fischer, Department of Entomology, Michigan State University.

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#### LITERATURE CITED

- Adams, C. C. 1909. (list of Cerambycidae) p. 199-201 in: An ecological survey of Isle Royale, Lake Superior. Rept. Bd. Geol. Surv. 1908. 468 p.
- Arnett, R. H., Jr. 1963 (keys to genera of Cerambycidae) p. 854-873 in: The beetles of the United States. Catholic Univ. Amer. Press, Washington, D.C. 1112 p.
- Chemsak, J. A. 1963. Taxonomy and bionomics of the genus *Tetraopes* (Cerambycidae: Coleoptera), Univ. Cal. Publ. in Entomol. 30:1-90.
- Chemsak, J. A. and E. G. Linsley 1975. Checklist of the beetles of Canada, United States, Mexico, Central America and the West Indies, Volume 1, Part 6, the longhorn beetles and the family Disteniidae (Red Version). Biol. Res. Inst. Amer., Latham, N.Y. 232 p.
- Craighead, F. C. 1923. North American cerambycid larvae. Dom. Can. Agr. Bull. 27. 239 p.
- Dillon, L. S. 1956. The nearctic components of the tribe Acanthocini (Coleoptera: Cerambycidae). Ann. Entomol. Soc. Amer. 49:134-170, 207-235, 332-355.
- Dillon, L. S. and E. S. Dillon 1941. The tribe Monochamini in the Western Hemisphere (Coleoptera: Cerambycidae). Reading Public Mus. & Art Gallery, Sci. Publ. 1. 135 p.
- 1948. The tribe Dorcaschematini (Coleoptera: Cerambycidae). Trans. Amer. Entomol. Soc. 73:173-298.
- Gardiner, L. M. 1970. Biological notes on some nearctic Lepturinae (Coleoptera: Cerambycidae). Pan-Pacific Entomol. 46:284-288.
- Gosling, D. C. L. 1973. An annotated list of the Cerambycidae of Michigan (Coleoptera) Part I, introduction and the subfamilies Parandrinae, Prioninae, Spondylinae, Aseminae, and Cerambycinae. Great Lakes Entomol. 6:65-84.
- Hatch, M. H. 1924. (list of Cerambycidae) p. 579-581 in: A list of Coleoptera from Charlevoix County, Michigan. Papers Mich. Acad. Sci., Arts and Letters 4:543-586.
- Hubbard, H. G. and E. A. Schwarz 1878. (lists of Cerambycidae) p. 638-639, 659 in: The Coleoptera of Michigan (with descriptions of new species by John L. LeConte, M.D.). Proc. Amer. Phil. Soc. 17:593-669.
- Knull, J. N. 1946. The long-horned beetles of Ohio (Coleoptera: Cerambycidae). Ohio Biol. Surv., Bull. 39:133-354.
- Linsley, E. G. and J. A. Chemsak 1972. Cerambycidae of North America, Part VI, No. 1. taxonomy and classification of the subfamily Lepturinae. Univ. Cal. Publ. in Entomol. 69. 138 p.
- Cerambycidae of North America. Part VI, No. 2. taxonomy and classification of the subfamily Lepturinae. Univ. Cal. Publ. in Entomol. (in press)
- Perry, R. H. 1975. Notes on the long-horned beetles of Virginia, Part III (Coleoptera: Cerambycidae). Coleop. Bull. 29:59.
- Swaine, J. M. and R. Hopping 1928. The Lepturini of America north of Mexico, Part I. Natl. Mus. Can. Bull. 52. 97 p.

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