

TIGER BEETLES OF WEST VIRGINIA

by Thomas J. Allen and Robert E. Acciavatti



WEST VIRGINIA
DIVISION OF NATURAL RESOURCES
WILDLIFE RESOURCES SECTION



Cover photo of *C. limbalis* by Thomas J. Allen.
Illustration (above) of *C. patruela* by Thomas J. Allen
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TIGER BEETLES

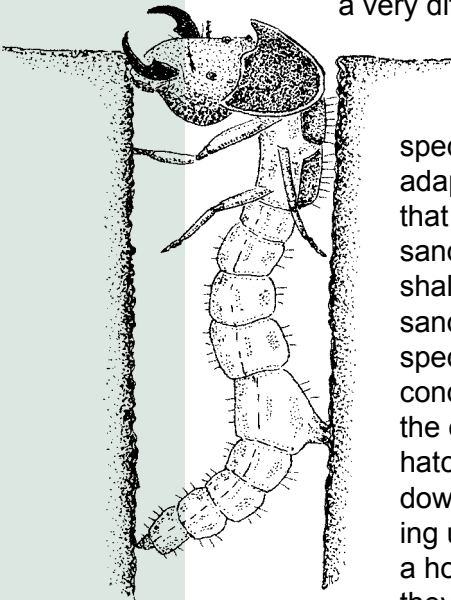
Tiger beetles are among the most colorful and interesting of all West Virginia beetles. Their predacious habits, as both adults and larvae, put them at the top of the insect food chain. Adults of nearly all species are diurnal, actively moving about during day-light hours. A few species remain active at night, and one species is strictly nocturnal. While on the ground, adults are very wary and quick to take flight if disturbed.

When undisturbed in hunting, adults exhibit deliberate movements as they search out and capture prey. Tiger beetles eagerly feed on a variety of small insects and other Arthropods, such as ants and spiders. Adults are active only within a specific range of temperatures, and when it is too hot, they move to the shade of grass, twigs and ground debris. When it is too cold, adults seek shelter under rocks and leaf litter or dig shallow holes in soil during periods of inclement weather and at night. Several species exist as adults over the winter in special chambers they dig in loose sand or packed clay.

All the tiger beetles in West Virginia can fly with the exception of three species, *Megacephala virginica*, *Cicindela unipunctata* and *C. cursitans*. All species present a challenge to observe and study. Those that can fly, will often do so in unpredictable directions for short distances at the slightest disturbance making them

a very difficult target for observation or capture. Those that do not fly, always run rapidly to cover.

Tiger beetle females of each species lay their eggs in soil most adaptive to the survival needs of that species. Some choose deep sandy soils, others prefer clay or shale banks, still others gravel, sand and silt near water. For each species, specific soil moisture conditions are critical for survival of the eggs and larvae. After the eggs hatch, the young larvae burrow down a specific distance depending upon the species, but maintain a hole to the surface from which they can capture passing prey.

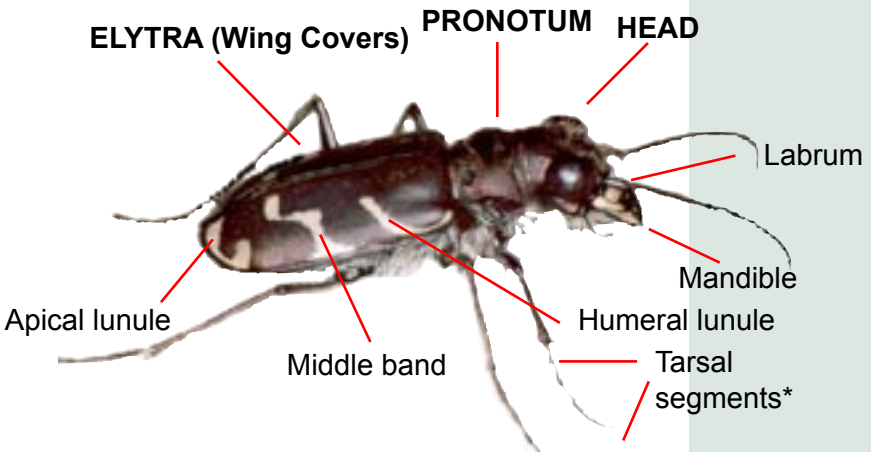


Typical tiger beetle larva

Each larva lives in its burrow until maturity, which takes from 1 to 3 years depending on the species. When fully grown, each larva closes its burrow entrance and has a short pupation period before it emerges to the soil surface as an adult.

Tiger beetles occur worldwide from the tropics to the boreal regions, and are represented by about 100 species and another 100 subspecies in many color forms across the United States. West Virginia has 20 species known either from the state or found close enough to its borders to have a reasonable likelihood of future discovery here. Of the 20 known species, all belong to the genus *Cicindela*, except for one *Megacephala*, a primarily neotropical group of large species.

Tiger beetle species can be identified by external adult features: 1) the dorsal color of the three body regions--head, pronotum and elytra or wing covers; 2) the number, size, shape and patterns of markings on wing covers; 3) mouthparts--the length of the labrum covering the mandibles or jaws at the front of the head. The picture below shows body regions, elytra markings and mouthparts used to identify adults of each species.



The best way to tell the sexes apart is to look at the tiger beetle's legs. Only the male tiger beetle has wide pads of dense hair underneath the first three tarsal segments of the front legs.*

TIGER BEETLE HABITATS __



Habitat of the Cobblestone Tiger Beetle (*C. marginipennis*).

Tiger beetle species are specially adapted only for certain habitats, so finding a particular species requires knowledge of which habitat that species prefers.

Close To Water Habitats

Several species are closely associated with water, and can be found along beaches and water edges. These include *C. marginipennis*, the Cobblestone Tiger Beetle, so specialized that it occurs only along major rivers like the Ohio River where water currents are strong enough to periodically scour beaches and expose cobbles and larger stones along shorelines. *Cicindela repanda*, a more common beetle, often is found near *C. marginipennis* habitats, but occurs in a wider variety of silty and sandy shoreline and

beach habitats along rivers, streams and lakes. *Cicindela ancocisconensis*, is found along rivers where there are large areas of loose, dry sand, either along the shore or on small islands. *Cicindela duodecimguttata*, may also be found



Shoreline habitat of *C. repanda* showing a larva burrow.



Bob Acciavatti

Eroded clay and mud shoreline of C. cuprascens habitat.

there, either where there is compacted silt or loose sand.

Other species found only near large expanses of water include *C. cuprascens*, which prefers eroded clay or mud soils along major rivers such as the Ohio River, and *C. hirticollis*, which frequents only large, open sandy beaches and wide expanses of damp, sand flats along major rivers.



Bob Acciavatti

Habitat for C. ancocisconensis.

Away From Water Habitats

Other species live away from water on sand, clay and shale in either field or forested habitats. Those species that prefer deep sands in river floodplains with natural deposits or dredging spoil areas include *C. formosa generosa*, *C. scutellaris lecontei* and *C. lepida*. Those species that are adapted to a wide variety of habitats, such as *C. tranquebarica*, *C. rufiventris* and *C. punctulata*, are common on



Typical habitat of *C. sexguttata* and *C. rufiventris*.

sandy, silty or shaly soils, such as abandoned sandstone quarries and road cuts. *Cicindela patruela*, *C. purpurea*, *C. limbalis*, and *C. splendida* are often found in open areas of sparse vegetation in a variety of woodland habitats. These may consist of trails, old woodland roads, gas well sites, power and gas line right-of-ways and road banks, or along the edges of forest openings of all sizes. Many of these sites may be at higher elevations above 3500 feet.



C. patruela habitat in lichens and grass on steep banks.

Two species are almost exclusively found only in forests and woodlands. *Cicindela unipunctata*, a flightless species usually only glimpsed as it crosses a woodland



Habitat for *C. tranquebarica*, *C. rufiventris*, and *C. punctulata*

road or trail, can be captured in pitfall traps. *Cicindela sexguttata*, a brilliant green woodland species, is well concealed along shady forest roads and trails dappled with sunlight as it takes flight and lands a short distance away.

Cicindela cursitans is a flightless species which occurs along the Ohio River away from water in non-forested slopes of low grasses and forbs mixed with heavily eroded silt and clay areas.

Megacephala virginica is another flightless tiger beetle found in low-lying riparian habitats. It may also be found in fields, pastures, parks, lawns and gardens, especially in low areas that might accumulate rainwater. This species, however, is nocturnal.



C. cursitans habitat.

Because tiger beetles are highly sensitive to changing environmental conditions and there is a great deal known about their ecological requirements, they are excellent bioindicators of ecosystem health.

WV TIGER BEETLE

Usually found near water



C. ancocisconensis (page 23)



C. duodecimguttata (page 13)



C. hirticollis (page 12)



C. cuprascens (page 28)



C. repanda (page 14)



C. marginipennis (page 26)



*M. virginica** (page 31)



*C. lepida** (page 30)



*C. cursitans** (page 29)



*C. splendida** (page 18)

*denotes species that may also be found away from water

COMPARISON GUIDE

Usually found away from water



C. limbalis (page 17)



C. purpurea (page 16)



C. tranquebarica (page 22)



C. formosa generosa (page 15)



C. scutellaris (page 21)



C. rufiventris (page 25)



C. patuela (page 19)



C. sexguttata (page 20)



C. punctulata (page 24)



C. unipunctata (page 27)

WV'S TIGER BEETLES



Cicindela hirticollis Say

This species has a body length of 12-15 mm, is very hairy on the pronotum, and brown on the elytra with broad markings that are continuous along most of the side margins. Each wing cover has an long, elbowed middle band, and a long humeral mark re-curved at its terminal end.

Adults are seen in spring and again in the late summer. They emerge from pupation in late summer, feed for a short time, then hibernate in the deep sand for the winter. The following spring, they become active again when the weather warms to mate and lay eggs for the next generation.

This tiger beetle occurs in sandy moist habitats, both inland on sandbars along major rivers, and along shorelines of the Great Lakes and both ocean seaboard. There are no recent records of this species from West Virginia, but historically it was reported from the state. This species is considered rare and even endangered throughout the Ohio River drainage and other parts of its geographic distribution. Both the completion of the lock and dams in 1929 which opened the Ohio River to navigation by impounding water, and the continuous dredging of the channel, have significantly reduced or eliminated the suitable habitats of broad, open, moist sand needed by this species. It is possible that this tiger beetle has been extirpated from West Virginia.

Cicindela duodecimguttata Dejean

This species has a body length of 12-15 mm, is dark brown to black above with markings on the elytra narrow and broken into irregular spots, usually 12 in number. Some adults have a complete humeral lunule and others have 1 or 2 spots missing.

Adults are seen in the spring and late summer; rarely in mid-summer at higher elevations. They emerge in late summer and feed for a period before hibernating in soil for the winter. When the weather warms, they emerge again in the spring to feed, mate and lay eggs.

This species frequents a variety of moist habitats along rivers, streams, pond margins and seeps in gravel pits and surface



strip mines, where bare, open banks and slopes favor the location of larval burrows. It sometimes occurs with *C. repanda*. This common species has been reported from many counties in West Virginia, and because its habitats are abundant throughout the state, it should be expected in all counties.



Cicindela repanda Dejean

This species has a body length of 10-13 mm, is bronze colored on the back with elongated markings, discontinuous along the sides. The humeral marking is short with a slightly curved apex. The labrum is small with a single tooth; the sides of the pronotum are metallic copper and hairy.

Adults of this common and often abundant species are seen over a long period during warmer weather, but only rarely during the hottest weather of the summer. This species emerges in late summer, feeds awhile, then hibernates in the drier sand for the winter. It reappears in the spring for more feeding, and to mate and lay eggs.

Adults occur most often on moist, sandy areas of open to sparsely vegetated soils near water. They rarely occur on dry, sandy sites away from water. This species has been reported from many West Virginia counties, and because it is a common beetle in riparian habitats, it should be found statewide.

The total body length of the adult tiger beetle used in this guide is based on the distance from the front of the head to the tip of the elytra or wing covers.

Cicindela formosa generosa Dejean

This is a large tiger beetle with a body length of 13-18 mm. It is dull reddish-brown on the back with very broad, white elytra markings, continuous along the side margins, and three oblique, broad projections into each wing cover.

Adults are found in the spring and late summer each year. They emerge in late summer to feed, then hibernate for the winter in the sand. They become active again the following spring when they again feed, mate and lay their eggs. This tiger beetle frequents large open areas of deep, dry sand, such as sand dunes and sand pits where vegetation is sparse and the sand is loose. All these sandy areas are away from water.

While this tiger beetle is widespread east of the Rocky Mountains, it has a limited distribution in West Virginia. It is presently known only from a few localized areas of suitable habitat in southwestern West Virginia along the Ohio River in alluvial sand deposits that have been exposed by excavations in sand and gravel pits,



during construction of highways and buildings, and where erosion has created gullies in fields and open forests exposing sand areas. Considerable past dredging of the Ohio and Big Sandy rivers in Wayne County has left very extensive spoil areas of suitable habitat for this species. Other populations may eventually be found in eroded areas of sandstone along the Potomac River of the eastern panhandle counties of West Virginia. Because of its very limited occurrence in the state and its specialized habitat, this species should be considered as one of Special Concern.

Cicindela purpurea Olivier

This species has a body length of 14-16 mm and is purple or greenish-purple with metallic green along the margins. The elytral markings are greatly reduced in size and number; the humeral lunule is absent, the middle band is narrow, slightly curved and does not reach the outer wing margin. The apical lunule is only a short dash. This beetle can be easily confused with *C. limbalis*; however, in *C. limbalis* the pale maculations are somewhat more



evident, including a wide, distinctly elbowed middle band which extends to the margin of the wings.

Adults are seen during the spring and late summer. They emerge in late summer and early fall; then hibernate during the winter and reappear in the spring to feed, mate and lay eggs. This is an upland species inhabiting openings on sparsely vegetated slopes with shale soils, meadow paths, grassy roadsides and forest clearings.

This species is localized in its distribution and never abundant. In West Virginia it occurs sporadically in the eastern and southern portions of the Allegheny Plateau, but is more commonly found in the Eastern Panhandle and adjoining counties of the Ridge and Valley Province.



Cicindela limbalis Klug

This is a large and beautiful tiger beetle measuring 13-18 mm in length. It is very similar to *C. purpurea*, but is usually more colorful by having purple to red wing covers with metallic green margins and the pronotum red in the center with contrasting green to blue along the margins. The middle band originates in the contrasting blue-green margin closer to the outer edge than in *C. purpurea*, and almost always has an abrupt turn or elbow toward the middle of each wing cover.

Adults are found early in the spring and again late in the summer. They emerge in late summer and early fall and fly until mid-October. They hibernate during the winter and emerge again in early spring to feed, mate and lay eggs.

This is an upland species found on eroded road banks and slopes of shale with sparse vegetation such as low forbs, grasses and lichens. It may also be found in open woodland habitats of loose, fine shale or woodland roads in shale habitat. This beetle is restricted to dry, shale slopes in the eastern portions of the state extending from the Allegheny Plateau to the Ridge and Valley region. In suitable habitat, it may be abundant.



Cicindela splendida Hentz

This species has a body length of 12-15 mm with head and pronotum a bright metallic green or blue. The elytra are dull brick red or copper color with green margins and only a small middle band and apical lunule on each wing cover.

This tiger beetle is rare and quite difficult to find. It emerges in the fall and is not very active. It then hibernates during the winter becoming active in early spring when it feeds, mates and lays eggs.

Adults of this species frequent sandy and clay soils in open slopes of gullies and road cuts, but can be found occasionally along dirt roads and trails with or without gravel. This species is distributed across the south-central and eastern plains region of the United States and is near the northern end of its range in West Virginia. It is not a common tiger beetle, presently known from only three West Virginia counties (Boone, Kanawha and Wayne), but likely also will be found in other southern counties.

Tiger beetles, because of their relatively large size, bright colors and attractive patterns of markings have been a very popular group among amateur insect collectors since the first guide to American species by Thomas Say in 1818.

Cicindela patruela Dejean

The body length of this species is 14-16 mm. It is bright green or greenish-brown on the back, and resembles *C. sexguttata*, except for the markings on the elytra. Wing markings are distinct and separate with the humeral lunule divided in two, a long, bent middle band narrowed at the center, and a white apical lunule.

This beetle has a two-year life cycle, overwintering the first year as a mature larva and the second year as an adult. Adults emerge in September and can be encountered for a short time in the fall before hibernating. The following spring they are usually more abundant. It is then that they feed, reproduce and later die during early summer.

Adults occur on dry sandy soils with sparse vegetation, such as mosses, lichens and low forbs where sandstone strata create natural forest openings. They can also be found along woodland roads and at the edges of abandoned sandstone quarries. This species ranges across the northern portions of the central and eastern United States southward into Georgia. The beetle is generally uncommon in West Virginia except in localized areas, but if suitable habitat is present, this species may be abundant. It has been found in dry portions of the northeastern counties, as well as in Lincoln and Wyoming counties.



Cicindela sexguttata Fabricius

This bright metallic green or bluish tiger beetle is 12-14 mm long and lacks all but two white spots along the sides, and a small white dash at the rear of each wing cover. A few individuals may lack most of the spots. No other tiger beetle in West Virginia is as bright green as this species. It is very common, being found in all counties of the state.

This species has a two-year life cycle, overwintering the first year as a mature larva and the second year as an adult. Newly emerged adults become active between April and June when they feed, reproduce, and then die during early summer. Rarely, a few new adults will emerge and be seen feeding during the fall.

Adults are associated with forest settings, such as stream banks in woodlands, openings created by humans (roads, trails, petroleum and gas drill sites and power line rights-of-way), and natural rocky open places. The species occurs on a variety of



soil types away from water, such as shale and sandy soils. When disturbed enough to fly, adults may land on rocks or tree trunks, rather than the ground, making them difficult to see or capture.

Some species of tiger beetles can be extremely abundant in their favored habitat, but are very elusive and often difficult



Cicindela scutellaris lecontei Haldeman

This robust, tiger beetle measures 12-14 mm in length. It has a shiny surface of green, purplish green, reddish green or red with small white markings, widely separated on the sides of the elytra. The humeral lunule may be short or absent, the middle band looks like a triangular mark at the side margin, and the apical lunule is wide and complete.

This tiger beetle is restricted to deep sand deposits away from water that are often disturbed or loose in nature. In West Virginia, such deposits most likely resulted from major river systems such as the Ohio River. The only records for *C. scutellaris* in West Virginia have been in Mason and Wayne counties.

Adults are found early in the spring and again in the late summer. They emerge to feed between September and October each year and then overwinter in burrows. Mating and egg laying occurs the following spring from April through June. This tiger beetle can often be found with *Cicindela formosa generosa* which uses the same habitat. Adults of both species have the habit of digging shallow burrows in the sand each night.

to see before they fly. Adults may take short flights, but land in open areas, face their pursuer and remain alert to fly again.



Cicindela tranquebarica Herbst

The body length of this species is 12-16 mm. Dorsally the beetle is brown to brownish-black with long, white markings on the wing covers. The most distinguishing mark is the straight oblique bar of the humeral lunule extending from the side margin nearly to the middle of each wing. Males also have a projecting bulge on the lower surface of the right mandible not found in other West Virginia species.

The adults of this species can be active as early as late February during unusually warm weather, but most are seen in March through May and again in September and October. This species has a two-year life cycle overwintering the first year as a mature larva, and the second year as an adult. Adults emerge from pupation between late summer and early autumn, hibernate in the soil over winter and become active again in the spring.

This beetle uses a variety of habitats. It can be found in sand quarries, on strip mines and dirt roads usually where dry, packed sand or silty sand is exposed and plentiful. This species is found across the United States and is often abundant in its preferred habitats. It has been reported from many of the southern and northeastern counties, but not those in the Eastern Panhandle. Undoubtedly, this beetle is more common than West Virginia records indicate as habitats the species prefers can be found in most counties.

Cicindela ancocisconensis Harris

This beetle has a body length of 14-16 mm and is a reddish-brown on top with greenish-blue reflections on the sides of the head and pronotum. The sides of the pronotum are metallic violet. The elytral markings consist of a series of narrow, separated lunules expanded along the sides. The mandible is large with three teeth.

This species has a two-year life cycle, overwintering the first year as a mature larva and the second year as an adult. Newly emerged adults become active during April through June when they feed, reproduce and then die during early summer. Rarely, a few new adults will be seen feeding during the fall. Adults emerge from pupation in late summer to early autumn, hibernate in the soil over winter and become active again in early spring to mate and lay eggs.

This species inhabits dry sandy banks and islands along major rivers in West Virginia from the Allegheny Mountains eastward. It is usually found in dry, sandy openings among sparse vegetation above the river shoreline. This species, while reported to be



declining over much of its range, can actually be quite common in the habitats it frequents in West Virginia. It has been reported from the southern and northeastern counties, but has not been reported from the western half of the state or the extreme Eastern Panhandle. It can often be found with *C. repanda* and *C. duodecimguttata*.

Cicindela punctulata Olivier

The body length of this species is 10-12 mm and its color is black to bronze-black on the back. The elytral markings are reduced in size to dots that vary in number between individuals. Some beetles have the humeral lunule and middle band broken, but the apical lunule is always complete.

Adults are active only during the summer into early fall. They emerge from pupation in late June to feed, mate and lay eggs, and remain active until October in the southern counties. This species has a one-year life cycle, overwintering the first year as larvae, maturing the next spring, and emerging in June as an adult. Adults are active both day and night. Adults may be seen running on the ground under fluorescent lights at gas stations, and are often taken in black light traps. They emit a noticeable and distinctive fruity odor when handled.

This beetle inhabits a wide variety of habitats with both open and sparsely vegetated soils of various types. It can be found in road cuts, eroded banks, forest trails and roads, strip mine sites,



lawns, gardens and plowed fields. This species occurs throughout most of North America east of the Great Basin. This is one of the most commonly encountered tiger beetles in West Virginia and can be found statewide during the summer months.



Cicindela rufiventris Dejean

This is a small, dull black tiger beetle with body length of 9-12 mm and varied elytral markings often reduced in size and number. The humeral mark and middle band are broken into small dots, some of which may be absent on some specimens. The apical mark is always present. The most distinguishing character of this species is that its rear abdominal segments on the underside are red.

This is a summer species whose adults emerge from pupation in late June and are most active through August to feed, mate and lay eggs. Some individuals can be found as late as early October.

Adults are found on open to sparsely vegetated soils containing mostly clay and gravel such as road cuts, eroded banks, shale pits, logging roads, skid trails and landings and strip mine sites. This beetle is widely distributed in West Virginia and should be found in all counties. Adults may be very abundant in certain places.

Adult tiger beetles are best collected by a slow, deliberate approach to open areas within a likely habitat. Aerial nets are best used to gather the specimens.

Cicindela marginipennis Dejean

Body length 12-14 mm. This beetle is uniquely marked by its olive-green to dark brown dorsal color and almost complete and continuous white band along the lateral side of each wing cover. On the underside of the body, the abdomen is reddish brown.

Adults emerge from pupation in late June and continue their feeding, mating and egg laying activities until early September. This rare and uncommon species inhabits the cobblestone heads of islands which appear in certain major rivers of the eastern



United States. In West Virginia, it recently has been found localized on the larger islands and certain shorelines of the Ohio River in Wood and Pleasants counties.

This species is known as the Cobblestone Tiger Beetle. Although the beetle takes this common name from this type of shoreline area, adults can often be found just above the cobblestones where vegetation is sparsely intermixed with the stone. In either situation, adults are difficult to see and capture among the stones.

Tiger beetle markings provide more than just concealment from predators. For some species in open, sandy areas, these markings can help regulate body temperatures.



Cicindela unipunctata Fabricius

This is a medium to large species with a body length of 14-18 mm. The body is dark brown dorsally with deep green depressed dots on the elytra. The elytra markings are reduced to a small dot on each wing cover at the middle of the lateral margin.

Adults are flightless, but escape by running rapidly under forest floor litter. These beetles are active between April and September, but are most abundant during June and July, when they feed, mate and lay eggs. This is an uncommon species associated with shaded forest settings where a chance encounter may find a specimen running rapidly amongst forest litter in search of prey, a mate, or to escape predators. Consequently, this beetle is most readily captured using pitfall traps placed along trails, abandoned roads or in small natural openings in the forest.

This species is distributed east of the Great Plains in North America. The few records of this beetle in West Virginia almost certainly are due to its elusive adult behavior. By running for cover under leaf litter, adults are difficult to see and capture. With more searching and trapping, this species will likely be collected more frequently, and undoubtedly be found to occur over a wider area in West Virginia than has been reported.



Cicindela cuprascens LeConte

This species has a body length of 10-14 mm, and is dull, metallic red or greenish brown in color. The elytral markings are large, the humeral lunule is recurved, the middle band is long and very irregular with several small spikes arising from it. The apical mark is broad.

This is a summer species. Adults emerge in June and continue their activity until August when they feed, mate and lay eggs. This beetle is associated with damp, sandy and clay shorelines of major rivers and their larger tributaries.

This species is widely distributed in the major river drainages of the central United States and reaches its eastern limit in West Virginia along the Ohio River in Cabell, Mason, and Pleasants counties. Because of its very restricted habitat requirements, the potential exists for loss of its habitat through increased impounding of the Ohio River. The absence of this species from seemingly suitable habitats would further argue for its consideration as a Species of Special Concern in West Virginia.

Several species of tiger beetles often coexist within a specific habitat . Competition is reduced by having mandibles of different lengths which partitions available prey among them.

Cicindela cursitans LeConte

This is West Virginia's smallest tiger beetle with a body length of only 6-8 mm. The body is brown to greenish brown above and metallic green to bronze underneath. The elytra have metallic green speckles mixed with irregular dark areas and reduced white markings. The most prominent markings are an enlarged triangle of the middle band at the lateral margin and an apical band, but some specimens may also have a white lateral margin.

Adults are active in early summer only for a short time during June and July. Its small size and habit of rapidly running and abruptly stopping gives it the appearance of an ant or spider, rather than a beetle. Such behavior makes it very difficult to collect an individual that runs rapidly into and among the cover of grasses and low forbs in old fields and other non-forested areas. It is most effectively captured with pitfall traps.

This is a grassland species from the Great Plains of North America that has spread eastward. The single record of this



beetle in West Virginia along the Ohio River in Mason County is the eastern-most occurrence of the species. It is likely that the species occurs in other suitable open and relatively undisturbed habitats on the western edge of the state. The localized occurrence of this species in a limited area of suitable habitats makes it a candidate for Species of Special Concern status in West Virginia.

Cicindela lepida Dejean

The body length of this species is 8-12 mm. The adult is green to red bronzed above with a shiny bronze surface and dense, white hairs covering the head, pronotum and bottom of the body. The elytra have large, expanded white markings that extend from the sides irregularly toward the middle of the wings. Legs and antennae are pale.

Adults are active during the summer, most commonly in July, but their activity extends until early September. They are not readily disturbed, and then only fly a short distance. The small size and white coloration of this species makes it almost invisible against the white sand of its habitat. This cryptic nature likely has kept it from being seen and collected in many suitable habitats. Adults are more active during the cooler periods of the day and their attraction to lights at night could be used to find them.

This tiger beetle has a wide distribution in North America. Adults occur on open areas of dry, deep, light colored sand, both on sandbars along major rivers and away from water in old beach dunes along shorelines of the Great Lakes and large sandstone



quarries. There are no records of this species from West Virginia, but it is known from southern Ohio, and suitable sandy habitats exist in Wayne County, West Virginia.



Megacephala virginica Linnaeus

This robust beetle with a green luster has a body length of 20-25 mm, making it West Virginia's largest tiger beetle. The elytra are dark green to black toward the center turning a bright metallic green toward the edges. Elytral markings are absent and the last abdominal segment, along with the antennae, legs and mouthparts, are pale orange to yellowish-brown.

Adults of this almost entirely nocturnal species are active from July into October. They are solitary in nature and not commonly seen because they actively hunt at night and hide by day under ground litter, such as rocks and debris. When encountered, they are usually running rapidly on the ground in damp riparian habitats, such as the margins of streams and rivers, both in the open and among vegetation. Adults can often be captured near lights at night feeding on other insects.

Megacephala is represented by numerous species in the neotropics, but only three reach the United States; of these, *M. virginica* has the most northern distribution. This species in West Virginia has been reported from a number of counties in the western portion of the state with records also from Berkeley County.

FOR MORE INFORMATION, CONTACT THE WV DNR
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