

# Northeastern Beach Tiger Beetle

*Cicindela dorsalis dorsalis*

## Description

Large, attractive, and cream colored, the northeastern beach tiger beetle roams beaches on the Chesapeake Bay and parts of the Atlantic Coast. Adults have a green-bronze head and thorax and paired dark markings on their cream-colored forewings, or elytra. These predatory beetles have large pinching jaws, long legs that allow fast movement, and long antennae. Adults are about 2/3 in. long; the larvae, already possessing large jaws, grow to 5/8 in.

## Similar Species

The northeastern beach tiger beetle is one of four subspecies of the eastern beach tiger beetle (*Cicindela dorsalis*) found on beaches of the Chesapeake Bay and the Atlantic and Gulf Coasts of the U.S. *Cicindela dorsalis media*, similar in appearance but darker and slightly smaller, is found only on Atlantic beaches from southern New Jersey to Florida. The other two subspecies inhabit beaches along the Gulf of Mexico from Florida to Mexico.

## Habitat

Broad sandy beaches provide the best habitat for these beetles. Adults live in the zone between the high-tide line and the dunes; larvae inhabit burrows in the upper intertidal zone. Larvae require beaches that are at least 5 yd. wide with some sand above high tide mark. The northeastern beach tiger beetle has adapted to habitat that is often unstable because of storm



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erosion and other disturbances. Newly emerged adults may fly more than a mile to colonize another beach. Presence of the beetle is an indicator of a healthy beach.

## Food Requirements and Behavior

Adult beetles roam and fly over the sand foraging for other insects and small crustaceans, which they grab with their large jaws. They also scavenge dead fish and crabs. Adults are active day and night in warm weather, feeding, mating, and laying eggs. Their numbers are greatest in July.

Larvae dig vertical burrows between 4 in. and 14 in. deep, depending on the size of the larva. They wait near the top of their burrow to catch small insects and crustaceans that pass by. Because they live in the intertidal zone, where



Burrow of a larva of *Cicindela dorsalis dorsalis*

prey is most plentiful, their burrows are inundated at high tide. As the water rises, they plug their burrows with sand, opening them again when the tide recedes. If conditions are poor, a larva will crawl out of its burrow and relocate.

## Life Cycle and Reproduction

Adults mate between late June and August, and females lay eggs in the beach sand, often in shallow burrows that they have dug. The larvae hatch approximately 12 days later and go through three instars, or stages of development, as they increase in size. It usually takes two years for larvae to become adults. They spend the months between November and March in hibernation in their beach burrows. In late spring, third-instar larvae envelop themselves in a cocoon in their burrows and emerge as adults in June. In Virginia adults emerge from their cocoons in mid-June. Some recently emerged beetles fly off, relocating to more distant beaches; others remain on the beach where they emerged.

## Virginia Distribution

The northeastern beach tiger beetle was once found from coastal Massachusetts to New Jersey and on beaches of the Chesapeake Bay. Other than two sites on Martha's Vineyard, in Massachusetts, the northeastern subspecies is found only on Chesapeake Bay beaches, in Virginia and Maryland. Locations of beetle populations vary from year to year because larval populations are wiped out by storms and other beach disturbances and because some adults fly to new locations.

## Conservation in Virginia

As a species, the eastern beach tiger beetle is rated by NatureServe as common and globally secure, but the northeastern subspecies is ranked imperiled both globally and at the state level. Furthermore, the northeastern beach tiger beetle is listed by the state and federal governments as threatened and likely to become endangered in the future. Storms and beach erosion can eliminate local populations, but the greatest threat is human activity, particularly vehicular traffic on beaches that kills larvae in their burrows. Heavy foot traffic is also detrimental to larvae. Development on beaches also harms the beetle's habitat.

The U.S. Fish and Wildlife Service has developed a conservation and recovery plan for sites inhabited by the beetle. Key components of the plan include monitoring populations, protecting beach habitat from foot and vehicular traffic, and educating landowners and the public about the endangered beetle. The plan also calls for a reintroduction of the northeastern beach tiger beetle to suitable protected beach habitat.

*For additional information on the eastern beach tiger beetle, see [NatureServe Explorer: Cicindela dorsalis](#)*

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