

## Did you know?

The Tisza mayfly (*Palingenia longicauda*) is an aquatic insect that can be found along the Tisza River in Hungary and Serbia. It is the largest Europe's mayfly species, measuring up to 12 cm in body length and 25 cm including the tail. The spread of its wings (of which the front ones are considerably larger than the back ones) measures up to 8 cm.

After the larvae rest in river flora for three years, at the end of spring and in the beginning of summer, depending on the water level and water temperature, numerous mayflies hatch as they spring out to the river's surface, creating a phenomenon known as "The Blooming of the Tisza", lasting only a few days. Unlike many other species of mayflies, adult *Palingenia longicauda* never move away from water; they fly low trailing their tails along it as they swarm, with their silk-like wings frequently touching the surface. The slow-moving river and absence of surface-feeding fish make this possible.

After hatching, the adults only have a few hours to mate before they die. Consequently, this will cause the whirl of clumsy flying of the "Tisza Flowers" in search of a mating body. The male dies first, while the female's life is prolonged, but only long enough to fly 1-3 km against the current to lay her eggs on river surface. The eggs drift to the bottom, hatching into larvae after 45 days and then digging tunnels in the river bed, forming dense colonies. The cycle begins again.

During its short life, the Tisza mayfly does not feed, but fills its intestines with air instead, which makes it easier to resurface and fly.



The mayflies are pollution-sensitive species; thus, their presence is an indicator of clean, unpolluted water. Accidental river pollution, however, remains one of the largest threats to the Tisza mayfly.

Although mayflies avoid light in their larvae form, they later they outgrow this characteristic, and illuminated bridges, ships and buildings are fatal light-traps into which several millions of them fall. Researchers are working to finding wavelengths and light polarities that are least disturbing.

Another threat to mayflies is the fact that larvae are a favorite food of many fish, and consequently a favorite bait used by fishermen who dig them out of the mud. This practice, at least, is not as common as it was in the past.

The Tisza mayfly has '**protected**' status according to the law, both in Hungary and Serbia, so that **mayfly specimens may not be collected, neither alive nor dead**. Nature lovers who come to observe the Tisza blooming can thus expect to see river patrols deployed to enforce the collection ban.



### **Where can I see the “The Blooming of the Tisza”?**

In Hungary, this phenomenon can be found in the Hortobágy National Park, where there are organized, guided tours. In Serbia, the mayflies are found upstream of the Senta settlement and near Kanjiža, as the clay bed composition is favourable for the species. They are also found sometimes further downstream, near Novi Bečej.

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