

Mayfly madness reflects water quality in Lake Erie

Lake scientists say an annual emergence of mayflies from Lake Erie is a clear sign that the water is remaining clean. But since their return in strength in the 1990s, the insects have also been a lakeshore nuisance from Toledo to Erie, Pa.

Mayflies invade the North Coast

Mature mayflies come ashore to mate each summer. The males die soon after mating, and the females return to the water, lay their eggs and then also perish. The eggs hatch into nymphs, burrow into the lake bottom, remain there for several years, then swim to the surface, shed their outer husk and fly toward shore.

Emergence zones

1. Most mayflies come from the shallow, warm and biologically rich western basin.
2. There was evidence that mayfly nymphs were emerging from the central basin for several years up until 2001, but then they mysteriously disappeared again.

Wind plays key role

Wind direction can determine how many ultra-light mayflies show up each year, some years blowing them over to Canada or from west to east toward Cleveland.

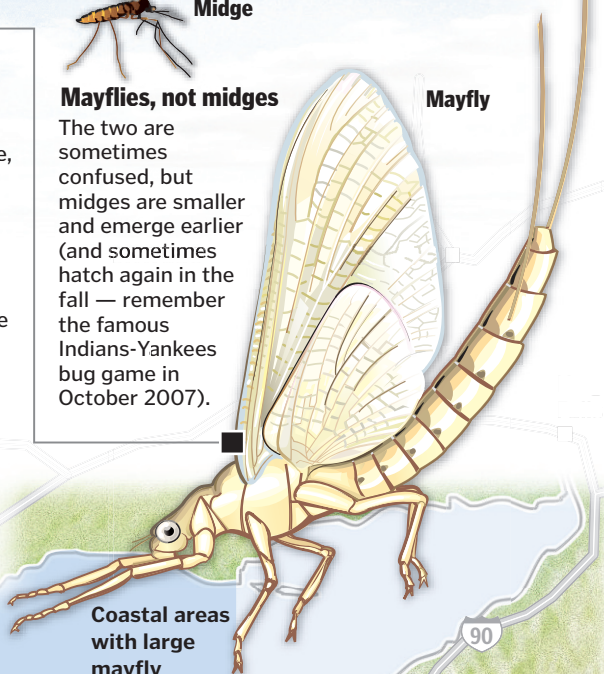


Midge

Mayflies, not midges

The two are sometimes confused, but midges are smaller and emerge earlier (and sometimes hatch again in the fall — remember the famous Indians-Yankees bug game in October 2007).

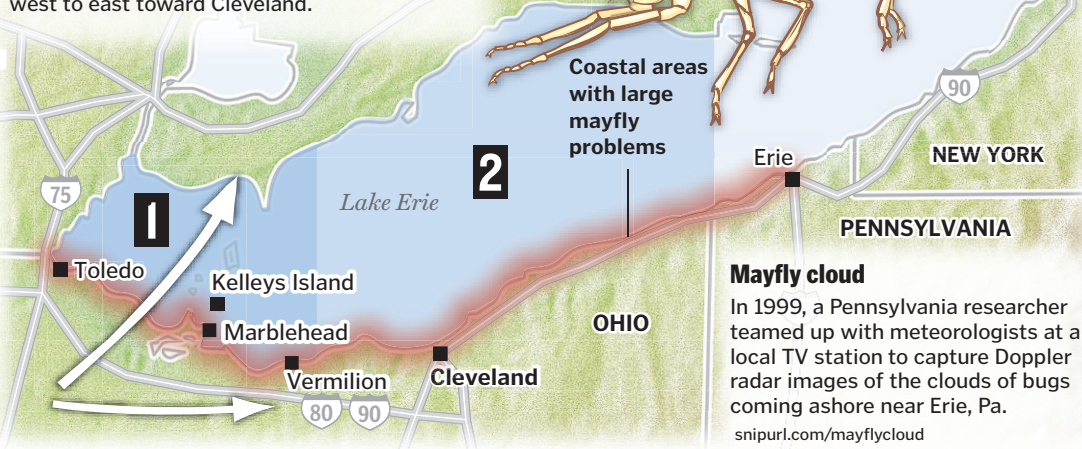
Mayfly



Coastal areas with large mayfly problems

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Mayfly cloud

In 1999, a Pennsylvania researcher teamed up with meteorologists at a local TV station to capture Doppler radar images of the clouds of bugs coming ashore near Erie, Pa.

snipurl.com/mayflycloud

SOURCES: Ohio Sea Grant; Pennsylvania Sea Grant; USGS; Great Lakes Science Center; National Center for Water Quality Research at Heidelberg College