



# Microchip: Smallest Man-Made Flying Structure

## Why in News

Recently, Northwestern University (US) has created an **Electronic Microchip or Microflier** with the capability of flight. It is the **smallest-ever human-made flying structure**.

## Key Points

### ▪ About:



- It is about the size of a **grain of sand** and does not have a motor or engine.
- It **catches flight on the wind** — much like a **maple tree's propeller seed** — and spins like a helicopter through the air toward the ground.

### ▪ Idea Behind the Design:

- The engineers optimised their design by studying maple trees and other types of **wind-dispersed seeds** and fashioned the micro flier such that when dropped from a height it would fall at a slow velocity in a controlled manner.
  - This behaviour stabilizes its flight, **ensures dispersal over a broad area and increases the amount of time** it interacts with the air.
- They designed many different types of micro fliers, including one with three wings, resembling the wings on a **tristellateia seed**.

### ▪ Significance:

- It can be packed with **ultra-miniaturised technology**, including sensors, power sources, antennas for wireless communication and embedded memory to store data.
  - **Miniaturization** is the trend to manufacture ever **smaller mechanical, optical and electronic products** and devices.
- It is ideal for **monitoring Air Pollution and Airborne Disease**.

**Source: HT**

