

Smelly Creeks

Blue-Green Algae in our waterways can produce a very unpleasant smell.



During November and December estuaries of the Tweed Coast, including Cudgen, Cudgera and Mooball can experienced the unpleasant smell and slimy slicks characteristic of a marine blue-green algae, Trichodesmium.

Trichodesmium is a tropical planktonic cyanobacterium (marine blue-green algae). It is transported south by the warm Eastern Australian Current. The colour may vary from red to brown, green or cream.

Reports of red tides offshore late in 1998, 2000, 2003, 2005 and 2009 indicates that the North Coast region of NSW is affected almost yearly by marine blue-green algal blooms along the beaches and in the river estuaries during summer.

These slicks are made up of masses of blue-green algae called Trichodesmium. The cells can join up to each other in strings and clumps. As the cells age they become buoyant and rise to the surface. If it is calm, these cells can aggregate into huge slicks that are sometimes so vast they are visible from space



Water sample taken from Twin Towns area.



Close-up of same water sample.

The algae is a natural phenomenon and was first recorded in Captain Cook's journals over 200 years ago as he sailed up the East Coast of Australia.

Smelly Creeks continued . . .

Oil, Sewage or Algae?

The blooms are often mistaken for oil or slimy effluent slicks on beaches and in rivers where it has been blown onshore by winds and tidal movements. It decays rapidly, usually turning greenish or releasing a purple dye. It also smells offensive, like rotting plant matter or chlorine gas.

A simple way to determine whether a substance is oil or algae is to rub it between your fingers. Oil will not wash off in water whereas *Trichodesmium* will.

Trichodesmium blooms may be an important food source for a variety of tolerant fish and invertebrates, however large blooms have been implicated in numerous fish, bird and turtle kills.

Health Risks of *Trichodesmium* Blooms:

Blooms of some *Trichodesmium* produce strong toxins which pose a real health risk to humans. People are advised to avoid swimming and surfing activities which may bring them or their pets into contact with water heavily affected by algal blooms. They are also advised not to eat shellfish from these areas.

In 1998 a number of people reported severe stomach upsets, nausea, eye, skin and breathing irritations and ear infections after contact with algal blooms.



Trichodesmium filaments.



Trichodesmium bundle.