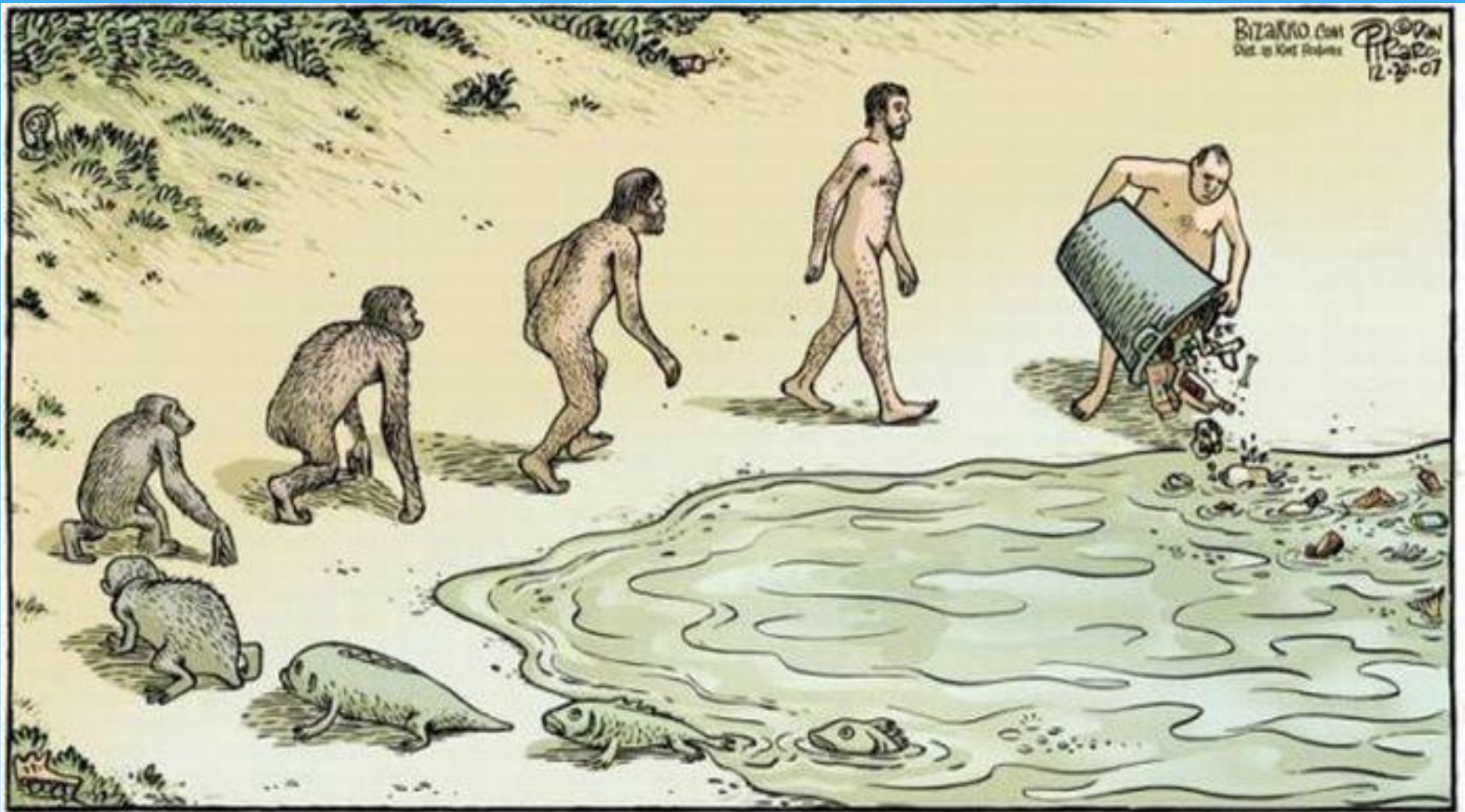


Plastic and the ocean

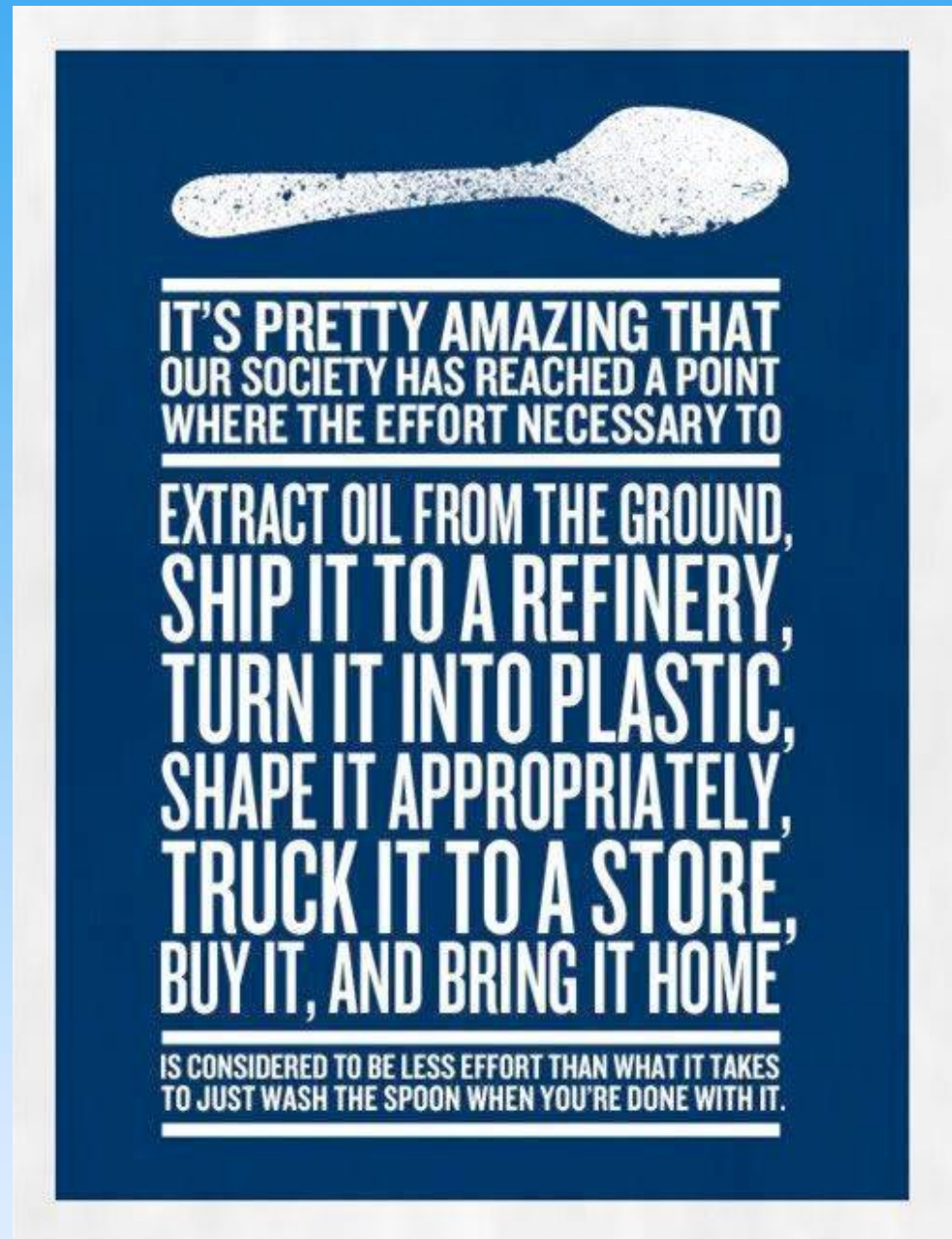


James Kennedy

Plastic

- Cheap
- Light
- Strong

- Used once
- Thrown away



Microplastics

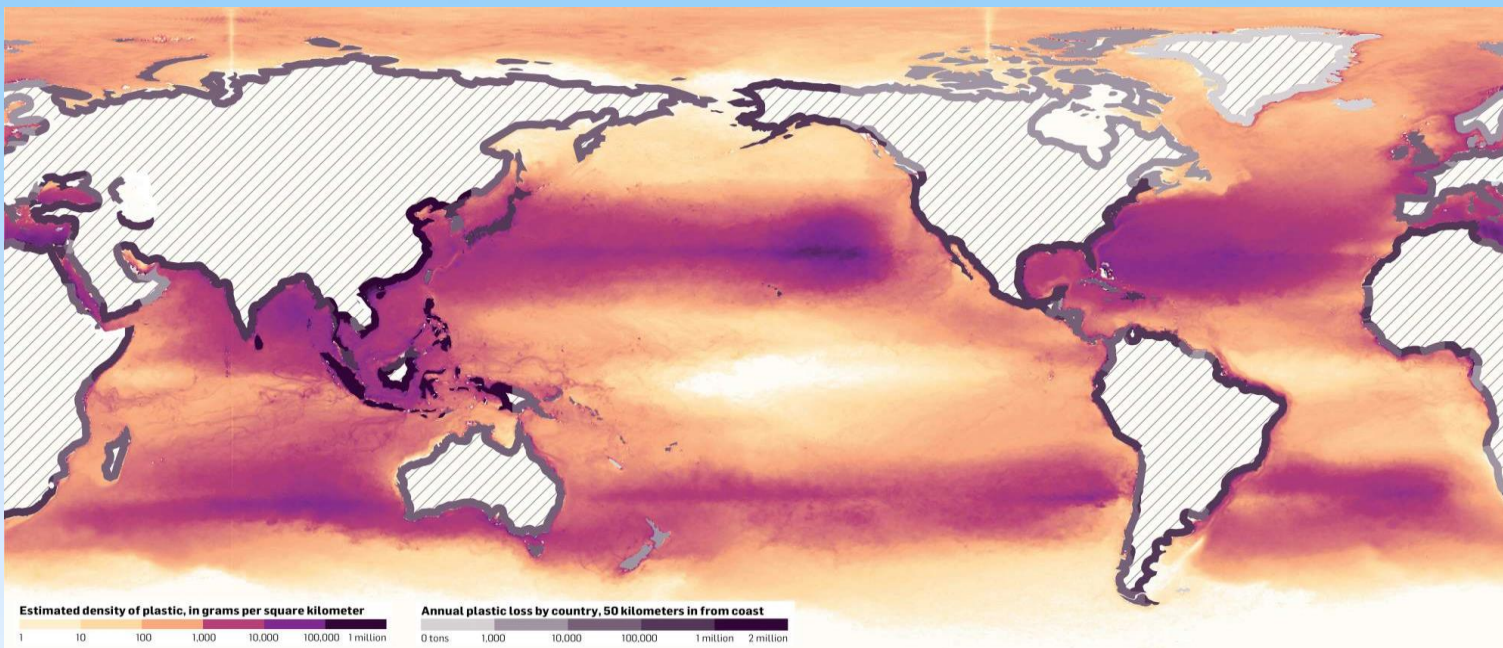
- Many facial scrubs contain tiny plastic particles.
- Cannot be filtered out
 - Polyethylene / Polythene (PE)
 - Polypropylene (PP)
 - Polyethylene terephthalate (PET)
 - Polymethyl methacrylate (PMMA)
 - Nylon



source: Marine Conservation Society

Distribution

- Estimated that 5 to 13 million tonnes enters the ocean each year.
- Plastic has been found:
 - in all oceans around the world
 - from ocean gyres to the deep sea
 - on coastal shores
 - frozen in sea ice



World wide problem



Christmas island



Hawaii

Philippines



India

Maldives



Albania



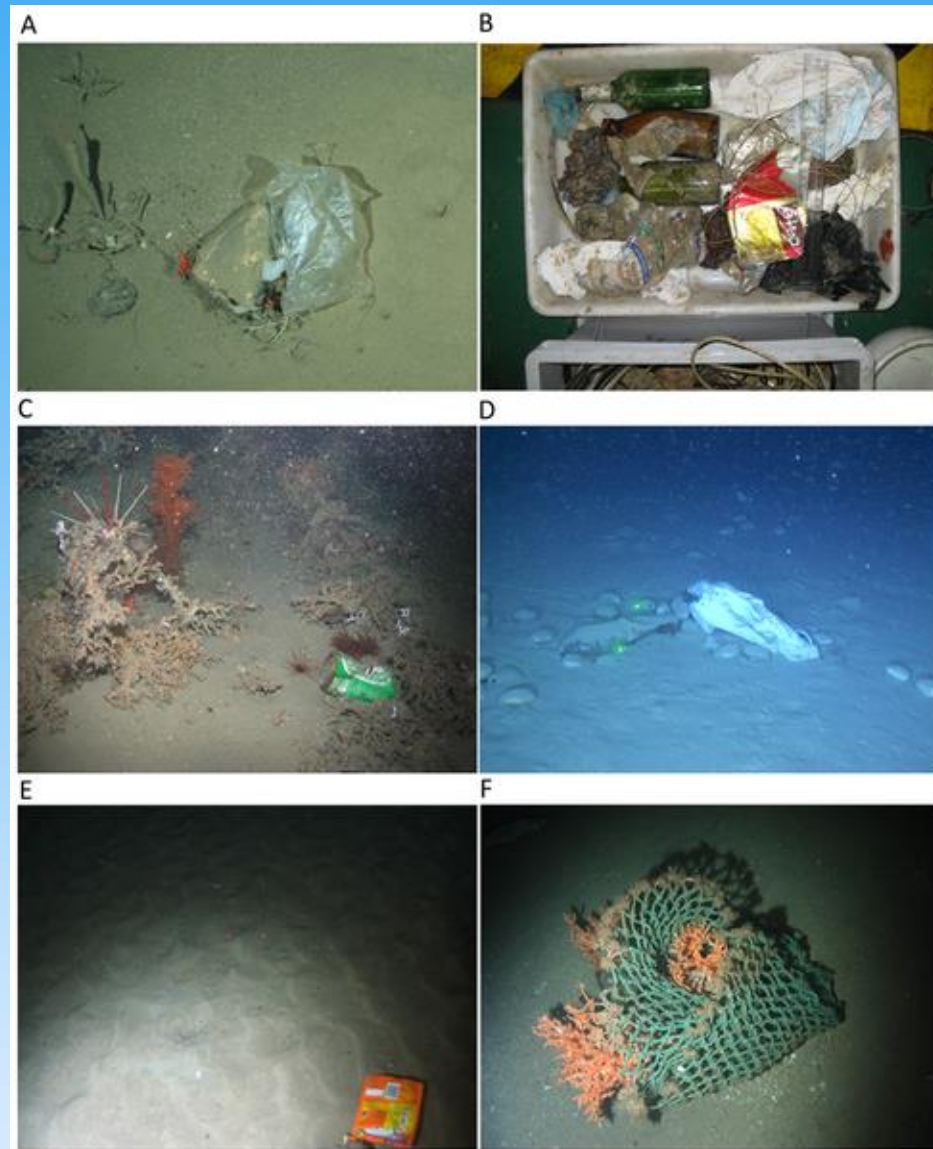
Niger delta, Africa



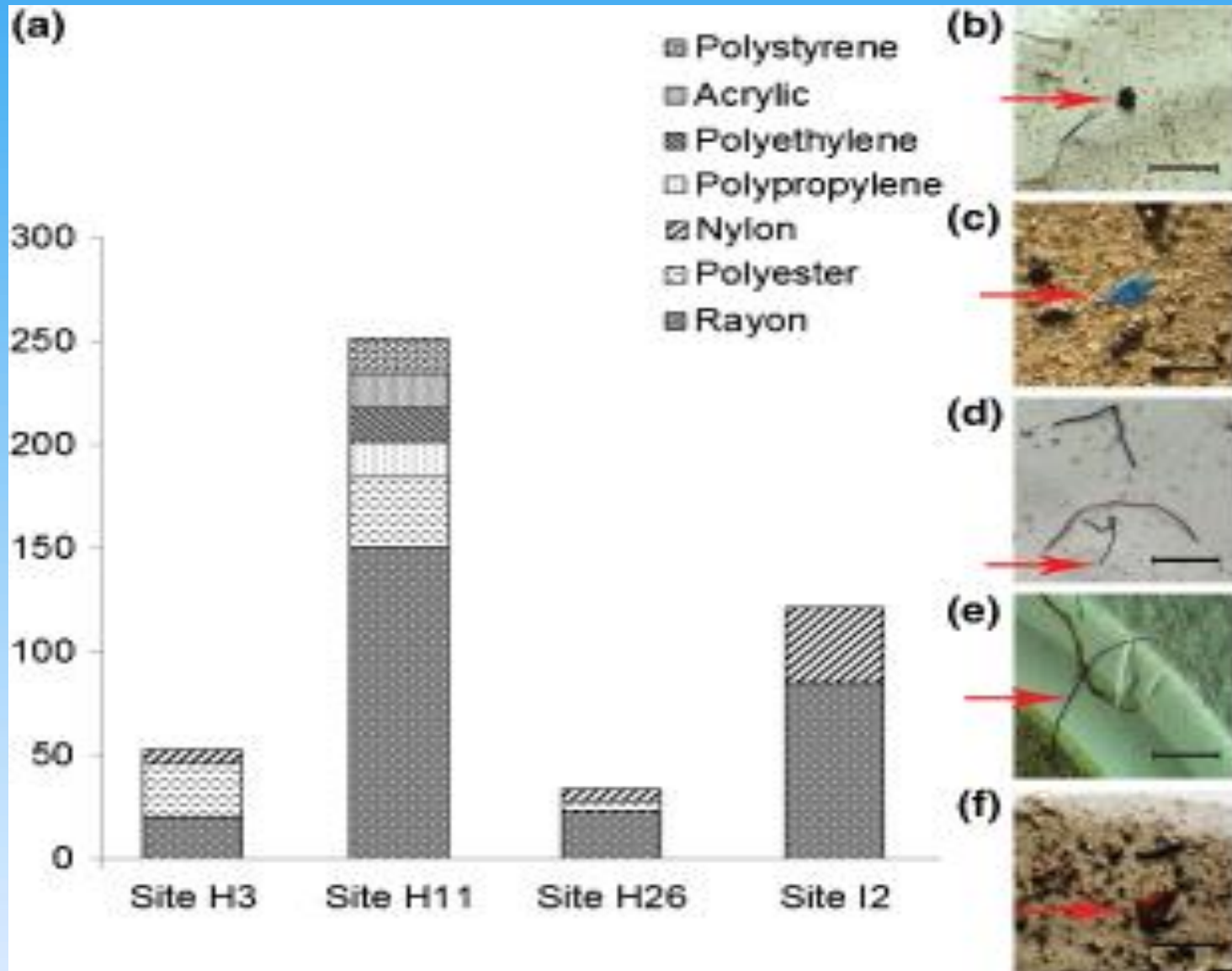
Piles up on the beach



>1000 m depth



Frozen in sea ice



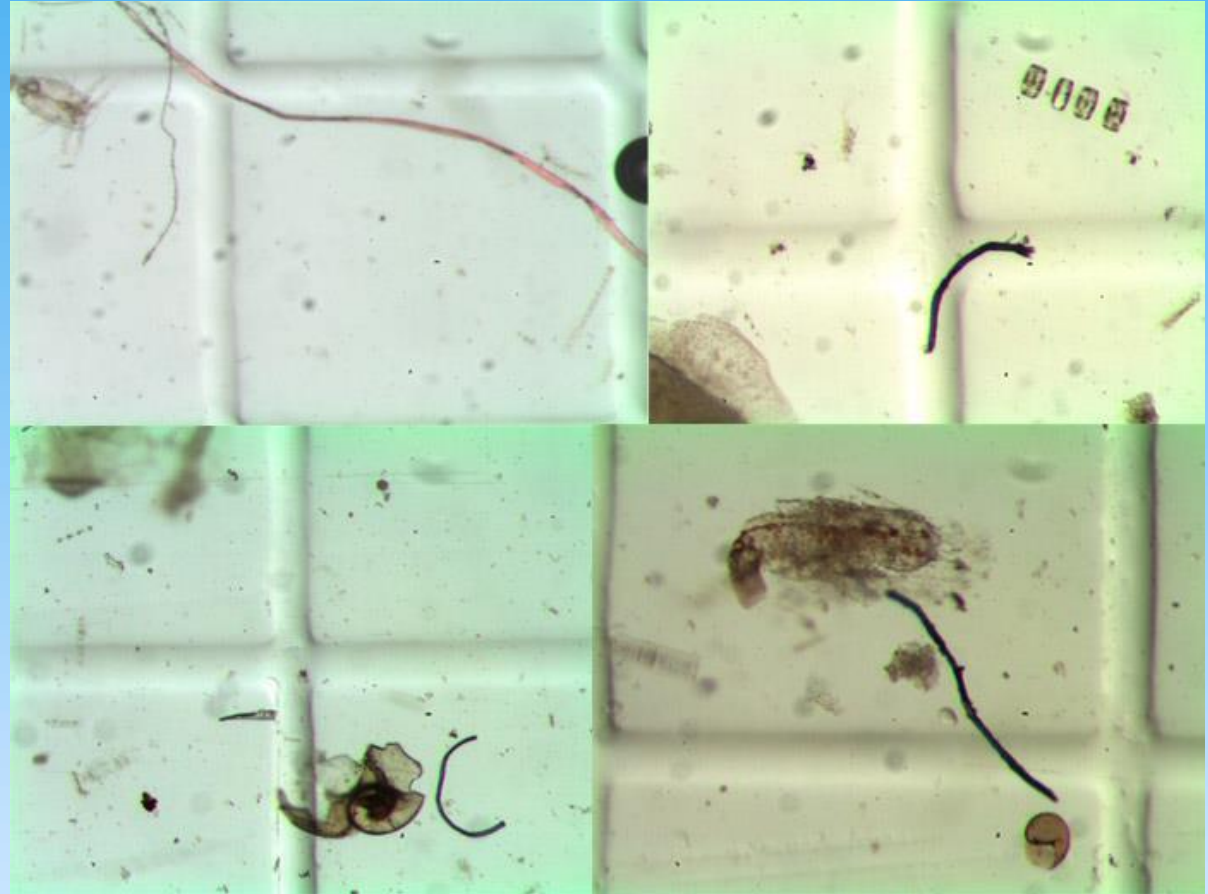
What happens to it?

Doesn't decompose!



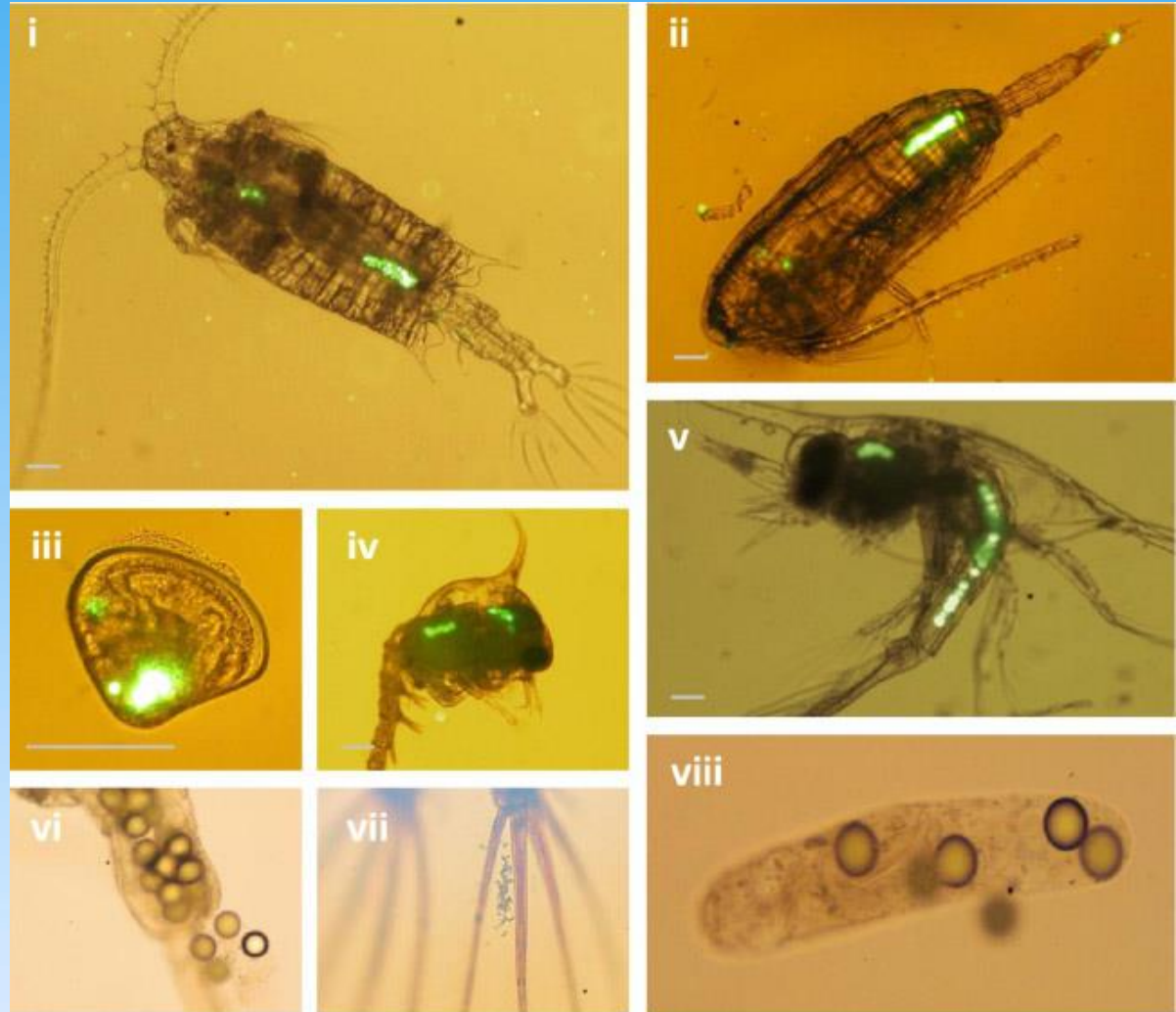
What happens to it?

- Breaks down into microscopic particles.
- Creates giant plastic soup.
- Dangers poorly understood



Dangers

- Eaten by plankton.
- Interfere with feeding.
- Clog feeding structures.
- These are eaten by fish and pass up the food chain.



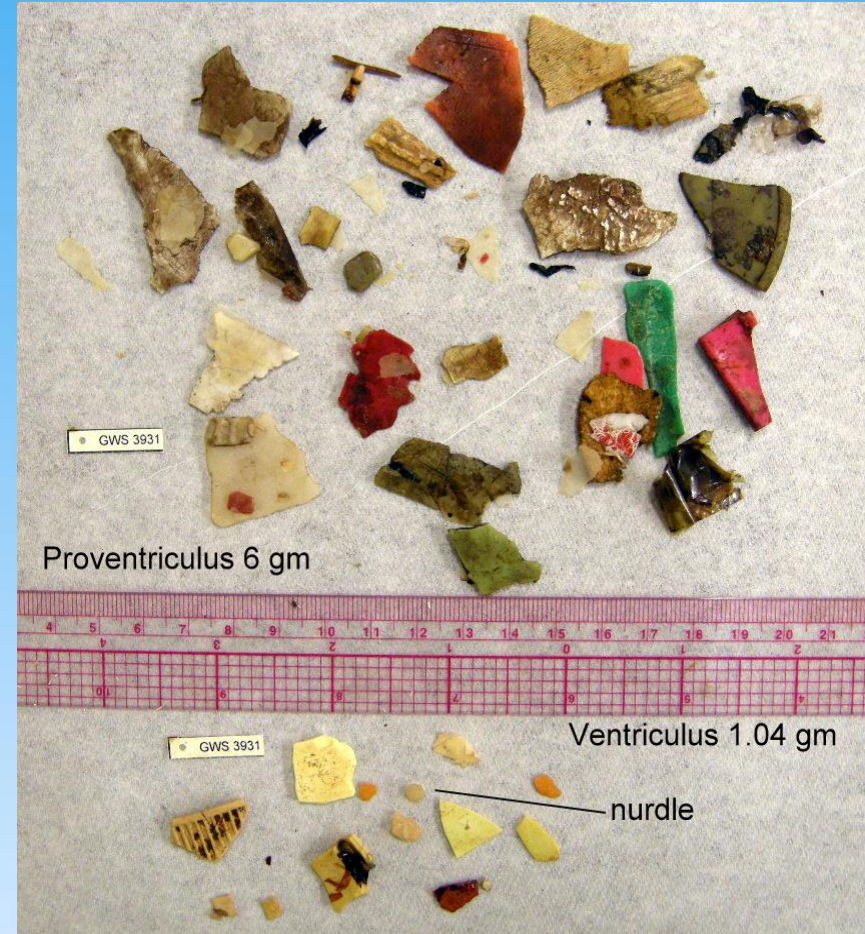
Dangers

Plastic fragments found in 5-week old rainbow runner caught at 23°05.35N, 147°12.86W on August 13, 2008.



Fýll

- 79 % of fulmars in Iceland have plastic in their stomachs



Death by greenhouse materials

- 10 m sperm whale.
- Ingested 17 kg plastic including 30 sq.m plastic canvas.



Dangers

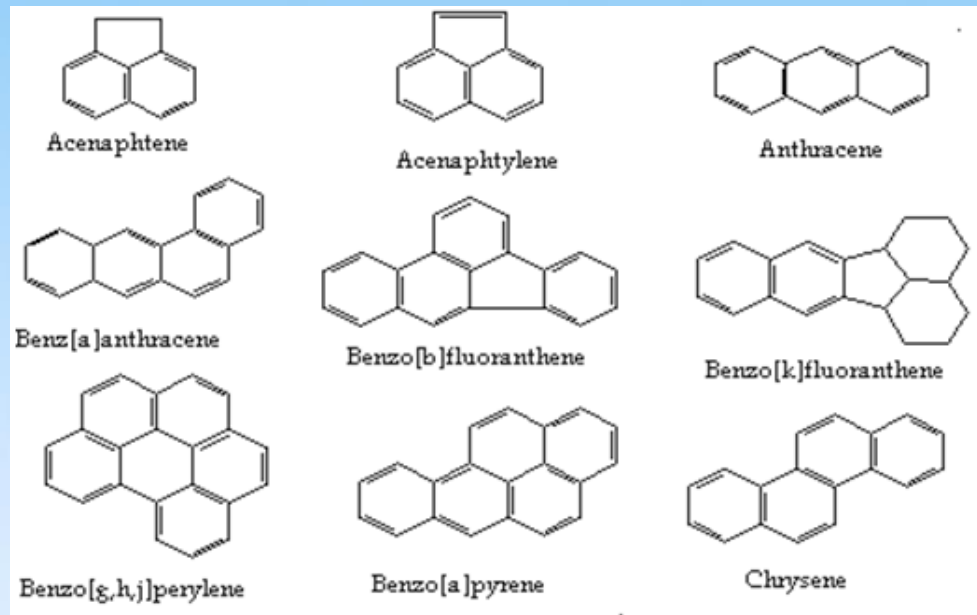


Svartbakkur



Dangers

- Plastic fragments absorb many pollutants
 - eg. DDT, DDE, PCB and PAH
- Become extremely concentrated, up to 1 million times the surrounding sea water.
- These pollutants can then be passed up the food chain.



How can you help?

- Individuals pick up rubbish around town and on the beach.
- Local government needs to take some responsibility
 - Removal of tyres and derelict fishing gear.



However

Prevention is better than cure

WE need to stop the flow of
plastic

**DON'T DROP
RUBBISH!!!**

**Of any type,
Anywhere!**

Problem areas in Skagaströnd



- Plastic bottles
- Shotgun pellets
- Tyres
- Fishing nets/rope
- Oil cans



The way forward

- The plastic problem has been caused by millions of small bad decisions.
- It can be fixed by everyone making small steps
 - End the use of single-use plastic bags.
 - Avoid plastic bottles.
 - Avoid 'paper cups'.
 - Avoid cosmetics containing microplastics.
 - Recycle plastic.

Together we can make a
difference

Thanks for listening

