

I Ciclo de montaña, medio ambiente e cambio climático

Clube Pena Trevinca

Vigo, 23 de Marzo de 2022

Plásticos no océano. Proxección do
documental: *O misterio do plástico
perdido*

R. Beiras

rbeiras@uvigo.gal



Son os plásticos unha ameaza para a vida mariña?



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Son os plásticos unha ameaza para a vida mariña?

El cachalote que murió en Cabo de Palos (Murcia) tenía 29 kilos de plástico en su interior (2018)

En 2013, otro cachalote fue encontrado en la costa Granadina con 18 kilos de plásticos en su estómago que le habían causado una ruptura gástrica, produciéndole la muerte.

Población de cachalotes en Mediterráneo oeste: n=400

<https://associocietacea.org/investigacion/cachalote/>

Son os plásticos unha ameaza para a vida mariña?



Evidencia científica:

Niveis máximos: 9-24 g per stomach (Auman et al. 1997)

*“ingested plastic probably does not cause direct mortality
... but likely causes physiological stress”*

“plastics ... have little or no impact at population level”

Son os plásticos unha ameaza para a vida mariña?



IBERDROLA CONOCENOS SOSTENIBILIDAD INNOVACIÓN COMPROMISO SOCIAL TALENTO CULTURA SHAPES

ISLAS DE BASURA EN EL MUNDO

Descubre las islas de plástico que contaminan nuestros océanos

#sostenibilidad medioambiental #sociedad #naturaleza

No figuran en los mapas, pero en nuestros océanos existen cinco islas de plástico flotante que amenazan con erradicar buena parte de la vida marina y contribuyen al cambio climático. Algunas de estas manchas de basura — como la del Pacífico Norte— tienen un tamaño equivalente a Francia, España y Alemania juntas.





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Garbage Patches

What and Where Are Garbage Patches?

Garbage patches are large areas of the ocean where litter, fishing gear, and other debris - known as marine debris - collects. They are formed by rotating ocean currents called "gyres." You can think of them as big whirlpools that pull objects in. The gyres pull debris into one location, often the gyre's center, forming "patches."

There are five gyres in the ocean. One in the Indian Ocean, two in the Atlantic Ocean, and two in the Pacific Ocean. Garbage patches of varying sizes are located in each gyre.

The most famous of these patches is often called the "Great Pacific Garbage Patch." It is located in the North Pacific Gyre (between Hawaii and California). "Patch" is a misleading nickname, causing many to believe that these are islands of trash. Instead, the debris is spread across the surface of the water and from the surface all the way to the ocean floor. The debris ranges in size, from large abandoned fishing nets to tiny **microplastics**, which are plastic pieces smaller than 5mm in size. This makes it possible to sail through some areas of the Great Pacific Garbage Patch and see very little to no debris.

Evidencia científica:

Máximo: 0.000007 g/L de plástico flotante
(Beiras & Schönemann 2021)



Discover the Issue

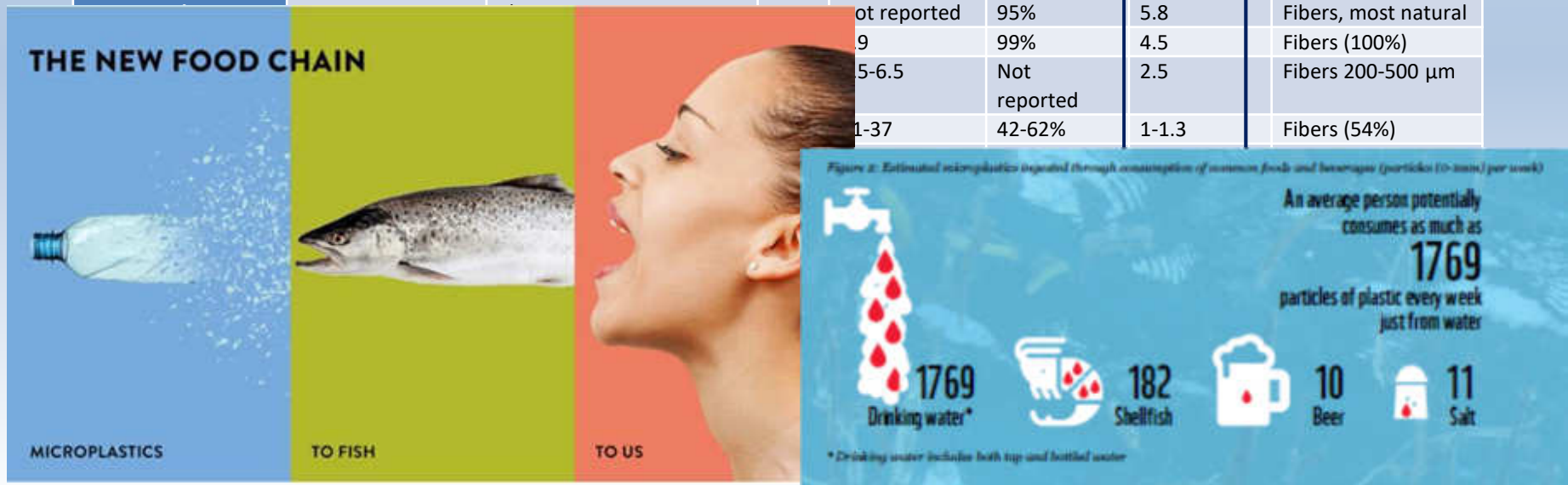
Regional Emmy® Award-Winning TRASH TALK

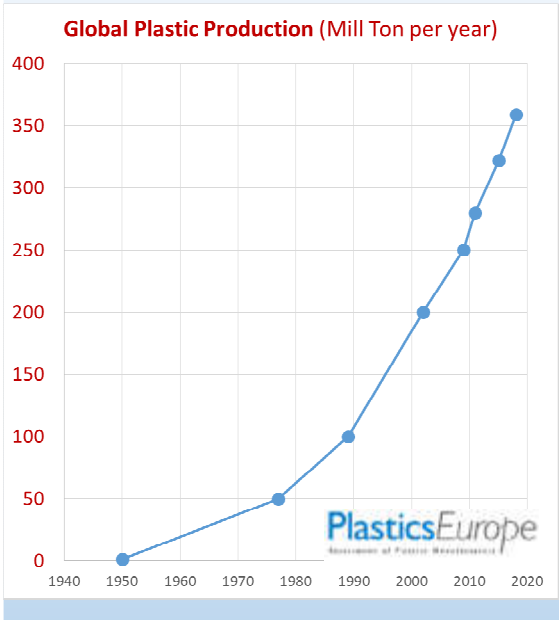
This 15-minute special feature introduces the many types of marine debris and how you can prevent some of the surprising and sneaky ways that trash flows into our rivers and the ocean.

É comer peixe con plásticos unha ameaza para a saúde humana?

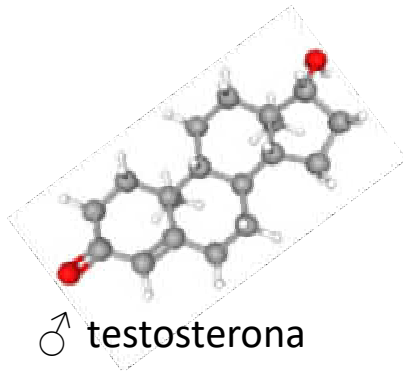
Evidencia científica: 0-2 microplásticos por estómago de peixe, ata 5 en marisco

study	location	sp	n	Size (cm)	prevalence	Items/fish	Most common item
Boerger et al. 2010	N Pacific Gyre	Planktivorous fish	670	1-10	35%	2.1	Fragments (94%)
Posato et al. 2011	Brazil	catfish	182	3-over 16	23%	0.1-1	Fibers
Lusher et al. 2013	S England	10 spp	504	Not reported	36%	0.7	Fibers (68%)
Foekema et al. 2013	N Sea	7 spp	1203	17-61	0-13%	0.03	Fragments
Devriese et al. 2015	N Sea	Crangon crangon	175	4-5.5	63%	1.23	Fibers
Avio et al. 2015	Adriatic Sea	Sardina pilchardus	99	12	19%	0.34	Fragments (57%)
Bellas et al. 2016	Iberian Coast	3 spp	212	Not reported	15-19%	0.15-0.36	Fibers (71%)
Nadal et al. 2016	Balearic Islands	Boops boops	337	10-25	68%	3.75	Filaments (100%)
Alomar et al. 2017	Balearic Islands	Mullus surmuletus	417	20	27%	0.42	Filaments (97%)
Beer et al. 2018	Baltic Sea	S. sprattus	415	12	18%	0.21	Fibers (93%)
idem	idem	C. harengus	299	20	20%	0.25	Fibers
Bour et al. 2018	Norway	Invertebrates & fish (10 spp)	174	-	6-65%	1.8	Flakes (45%)
				Not reported	95%	5.8	Fibers, most natural
				9	99%	4.5	Fibers (100%)
				5-6.5	Not reported	2.5	Fibers 200-500 µm
				1-37	42-62%	1-1.3	Fibers (54%)

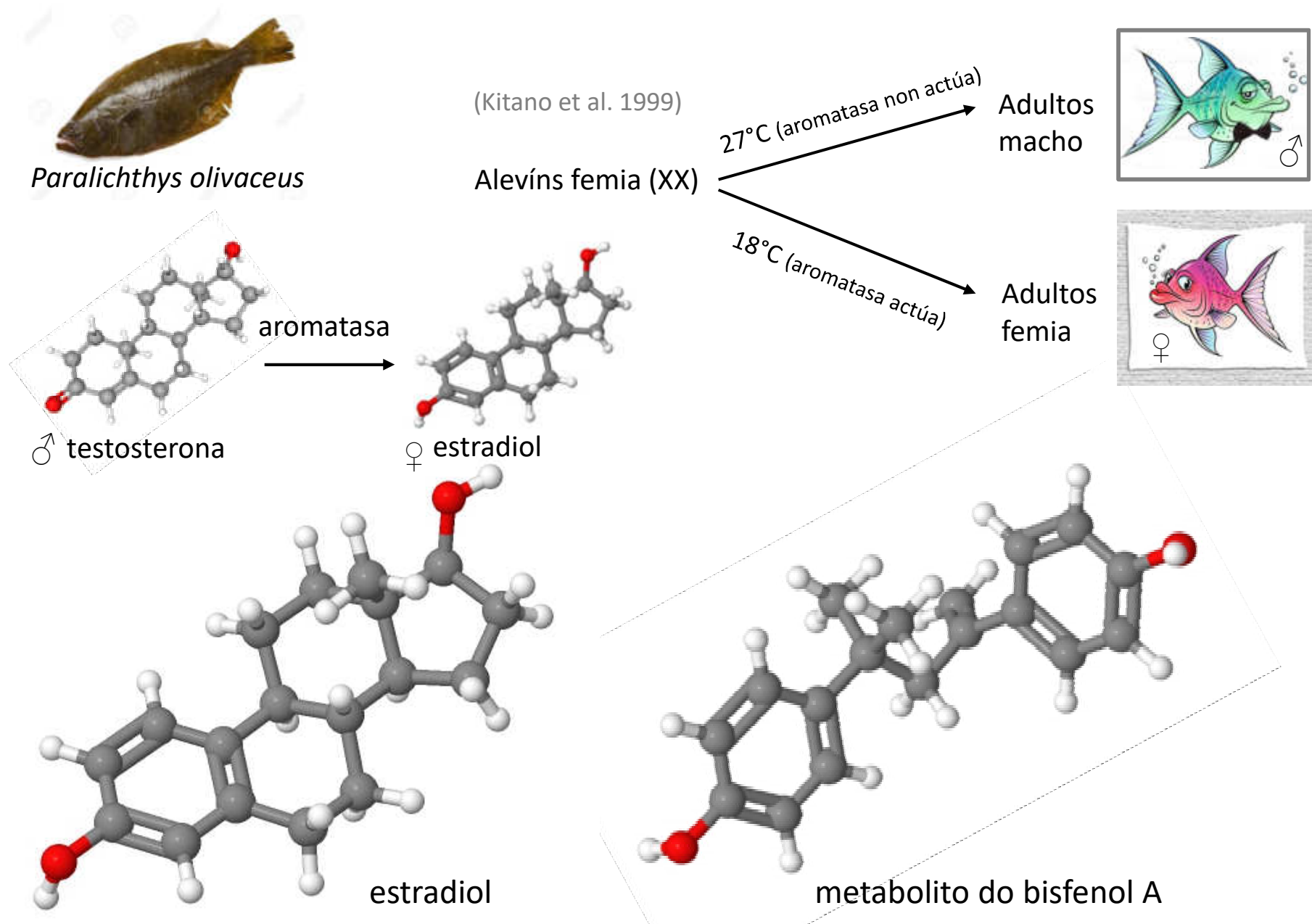




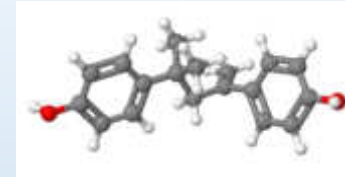
Determinación do sexo



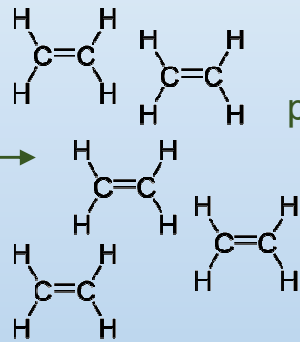
Determinación do sexo: hormonas esteroideas



¿Cómo se fai un obxecto de plástico?



Petróleo



polimerización

Polímero
(ex. Polietileno)



aditivos

Plastificantes, retardantes de chama, antioxidantes, colorantes...

compounding

Obxecto de plástico



Proxección do documental: *O misterio do plástico perdido*

Agradecementos:



Universidade de Vigo



galicia

