Grasslands don’t have to be old to be interesting

Butterfly Conservation

Saving butterflies, moths and our environment

What is happening to our wider countryside butterflies?

-88%

-87%

-75%

-73%

-54%

-41%

-37%

-30%

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Why are declines happening?

We don’t know, but reasons include:

- Loss of habitat / declining quality
- The bits that are left are too far apart
- Air pollution: nitrogen deposition

Improving wildlife in our greenspaces

- What makes grasslands diverse?
- What makes grass grow?

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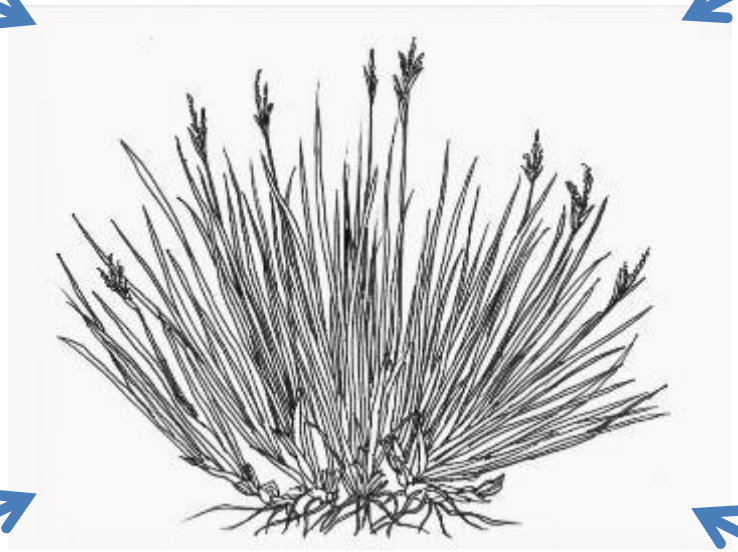
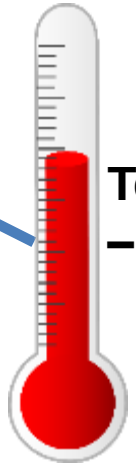
Can we control the factors that make grass grow?

Rainfall – no control

Sunshine – no control



Soil fertility – we can control



Temperature – no control

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What does soil fertility do to grassland?

Restoration of Hines Landfill Wareham, Dorset

1995


1999

2008

2019

V3

2019

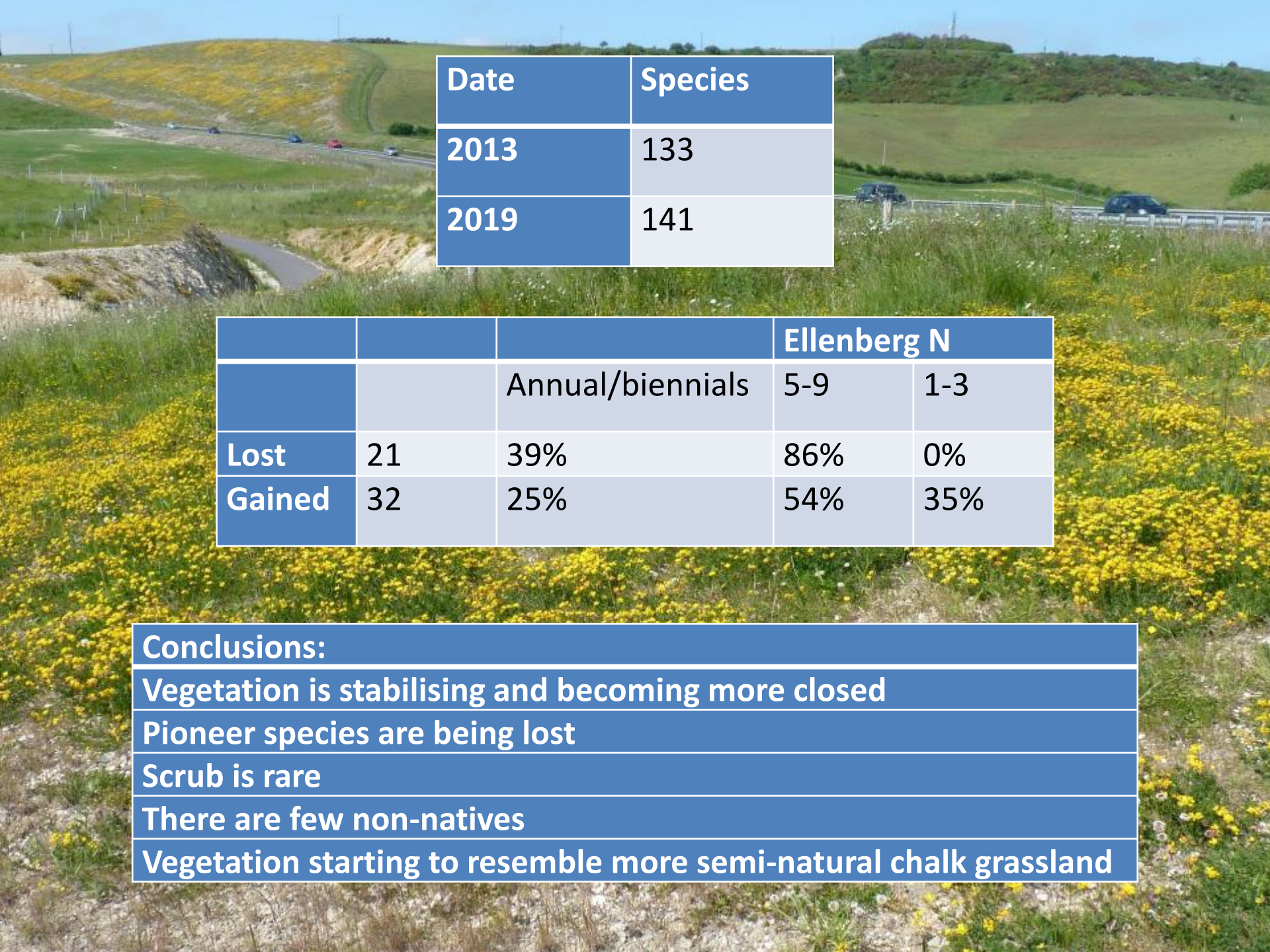
Weymouth Relief Road, Dorset (2009 – 2011)

Low fertility verges designed in
Scatter of 15mm topsoil or no topsoil
Wildflower seed hand sown

SEED MIX
Crested Dog’s-tail
Red Fescue
Sheep's Fescue
Yarrow
Greater Knapweed
Common Mouse-ear
Rough Hawkbit
Oxeye Daisy
Bird's-foot trefoil
Wild Marjoram
Cowslip
Yellow Rattle
Salad Burnet
Black Knapweed
Wild Carrot
Lady's Bedstraw
Kidney Vetch
Horseshoe Vetch
Bee Orchid
Pyramidal Orchid
Autumn Lady’s Tresses
Viper’s Bugloss
Devil’s-bit Scabious
Small Scabious
Field Scabious


2013


2019



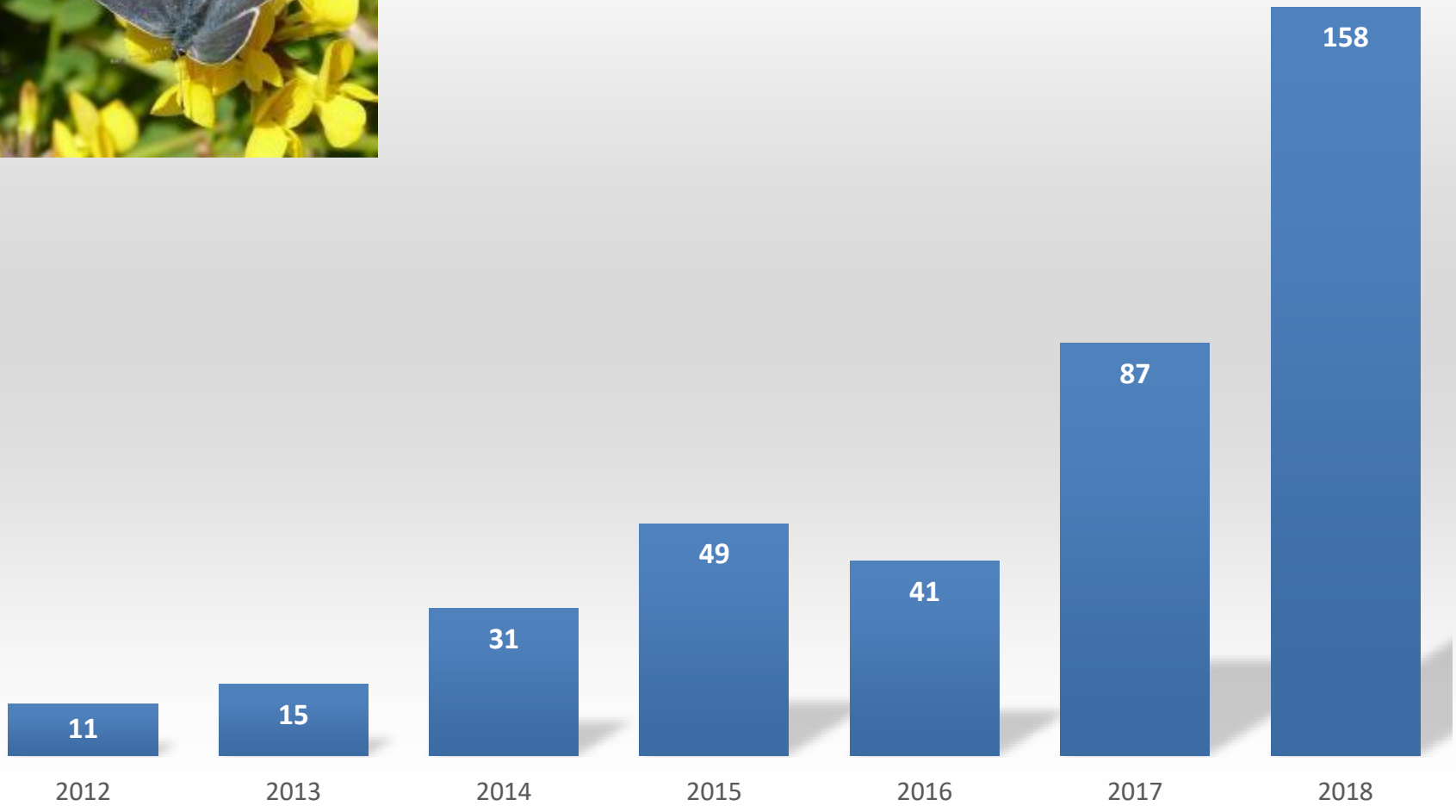
Date	Species
2013	133
2019	141

			Ellenberg N	
		Annual/biennials	5-9	1-3
Lost	21	39%	86%	0%
Gained	32	25%	54%	35%

Conclusions:
Vegetation is stabilising and becoming more closed
Pioneer species are being lost
Scrub is rare
There are few non-natives
Vegetation starting to resemble more semi-natural chalk grassland


2012

Small Blue total count on 2 sections of transect

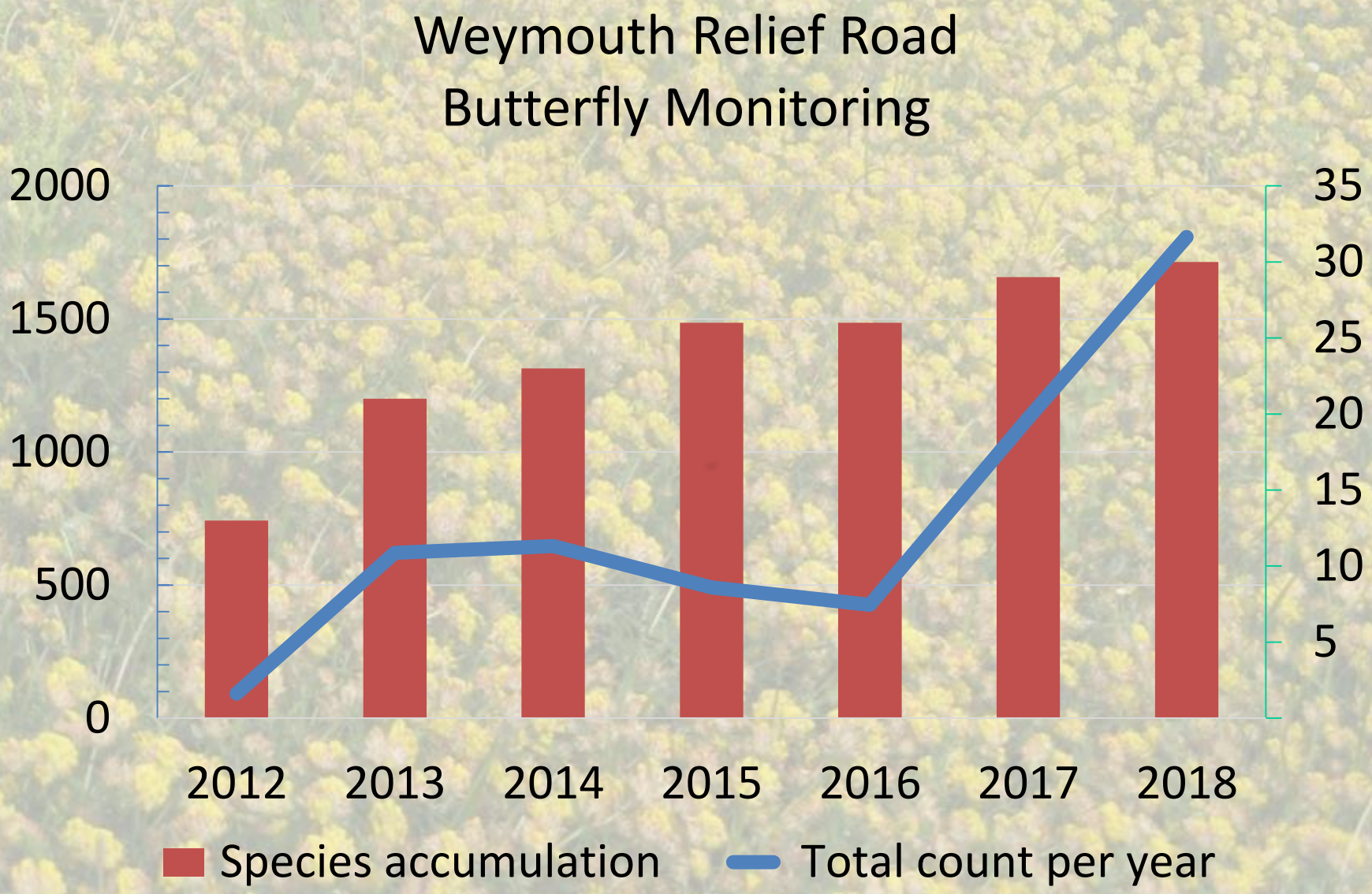



Welcome to
WEYMOUTH &
PORTLAND
Home of the
National Sailing
Academy
Follow signs to
Portland

2013

2018

If you build it they will come …



Conclusions

- **Herb-rich grasslands of value to invertebrate conservation are straightforward to create**
- **Fundamental ecological principle: low fertility substrates lead to high plant/invertebrate diversity**
- **Vegetation growth can/should be controlled by design**
- **It takes time for invertebrate populations to establish, but …**
- **Depending on substrate, great results can be achieved in fewer than 10 years, and certainly with 30 years**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