



Ain't no mountain high enough
Saving the Upland summer mayfly
Craig Macadam

www.buglife.org.uk
[@buzz_dont_tweet](https://twitter.com/buzz_dont_tweet)

Ameletus inopinatus





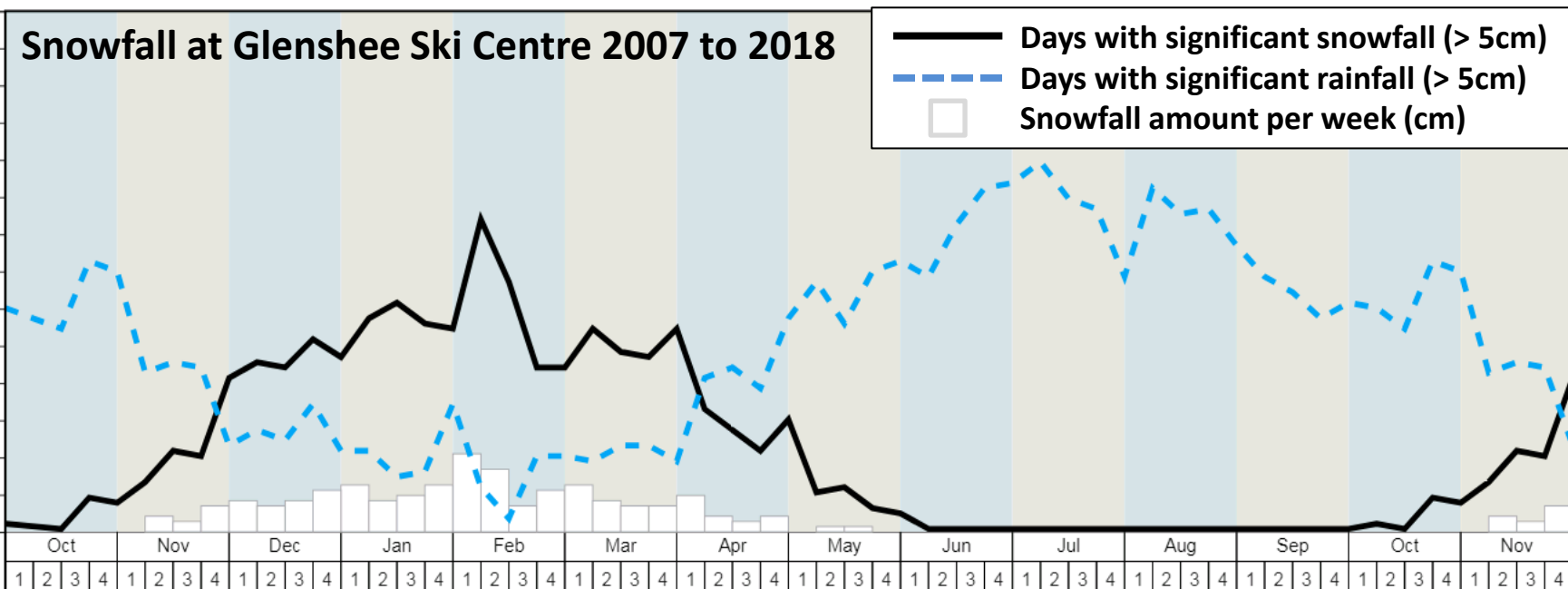


Snowfall at Glenshee Ski Centre 2007 to 2018

- Days with significant snowfall (> 5cm)
- Days with significant rainfall (> 5cm)
- Snowfall amount per week (cm)

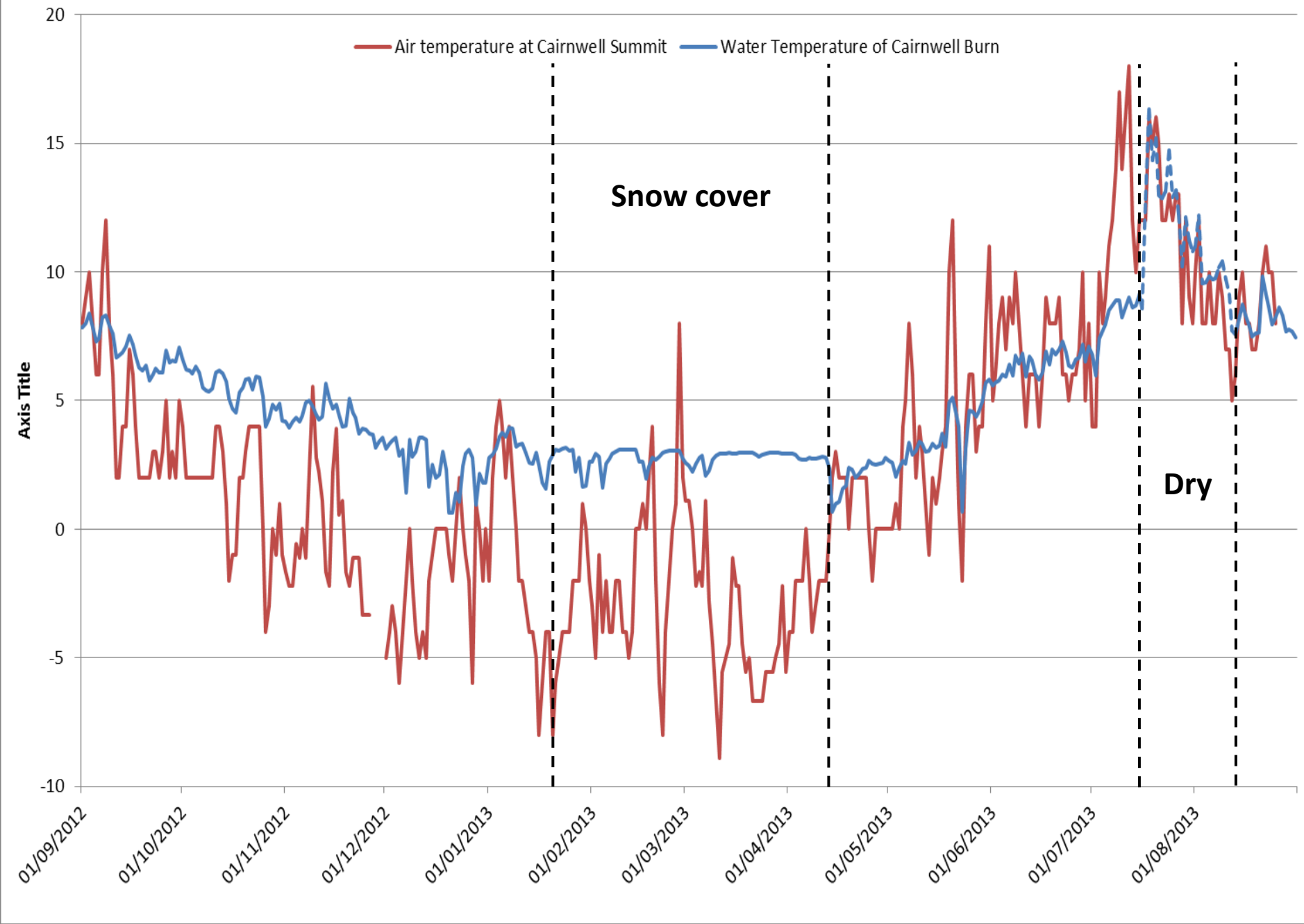
Days per week

Snowfall per week (cm)





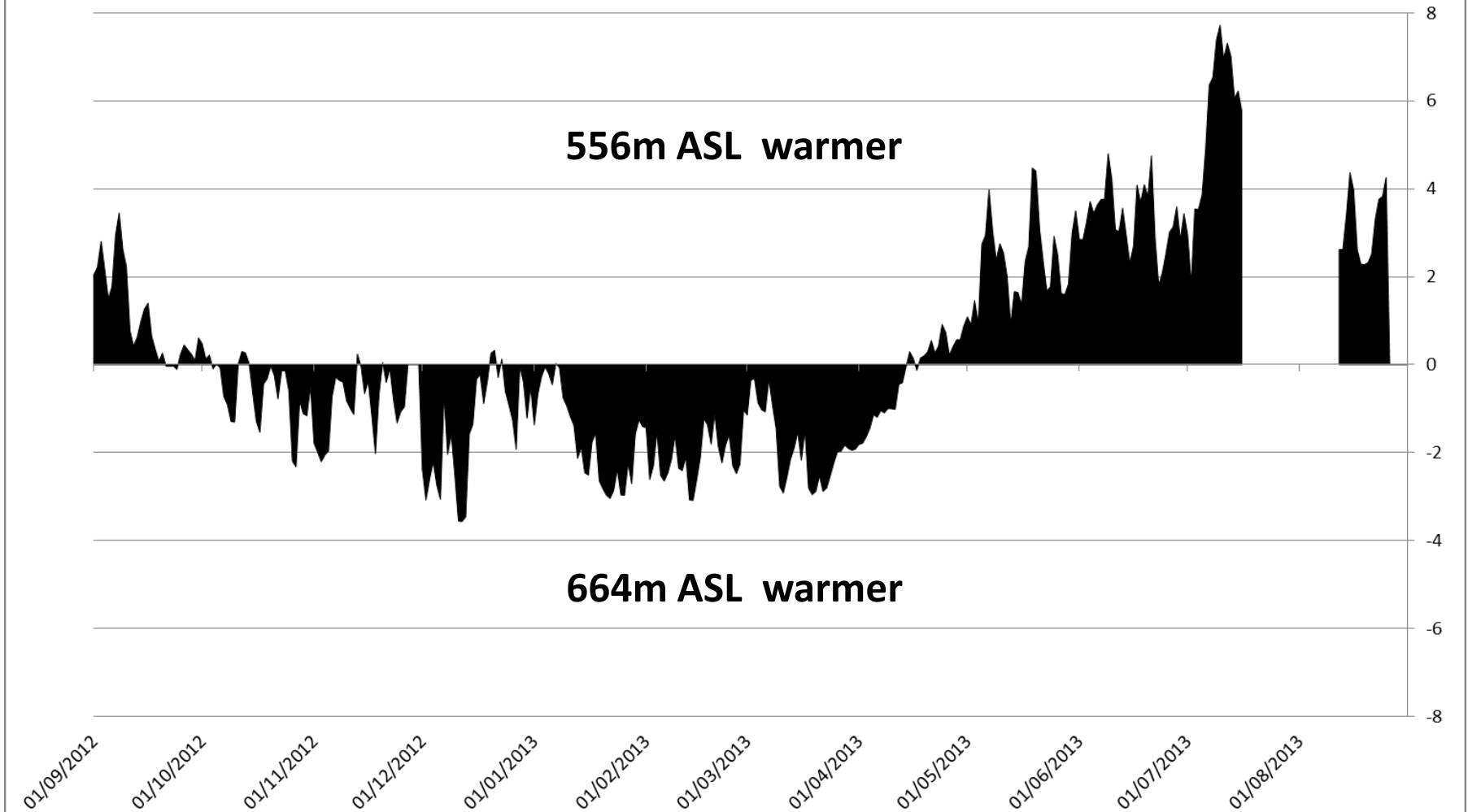
Mean water temperature (at 664m) vs Mean air temperature (at 928m)



Cairnwell Burn at 664m vs 556m ASL

556m ASL warmer

664m ASL warmer



North vs South flowing streams at 556 metres ASL

North flowing warmer

South flowing warmer

1-Sep-2012

1-Oct-2012

1-Nov-2012

1-Dec-2012

1-Jan-2013

1-Feb-2013

1-Mar-2013

1-Apr-2013

1-May-2013

1-Jun-2013

1-Jul-2013

1-Aug-2013

-5

-4

-3

-2

-1

0

1

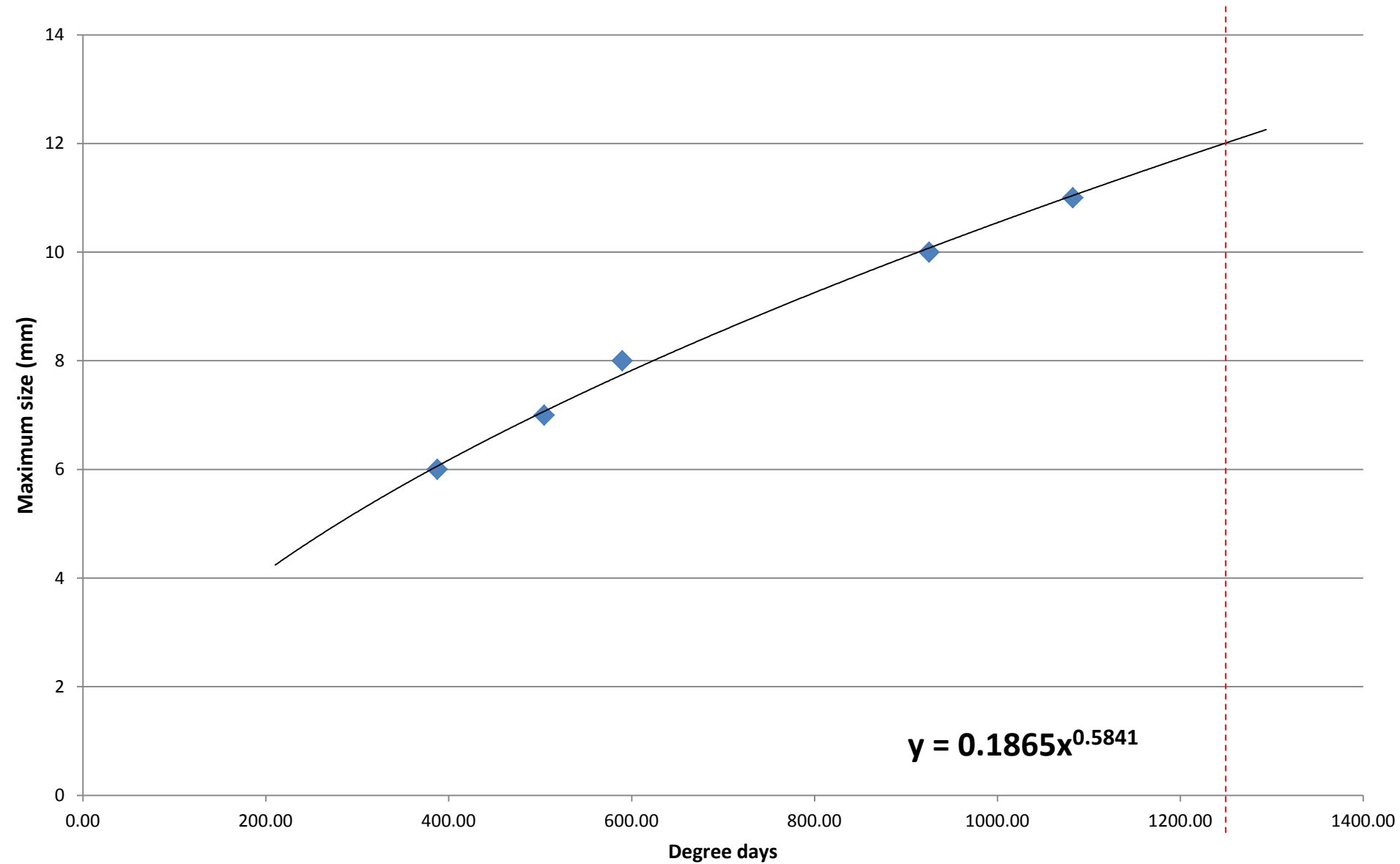
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3

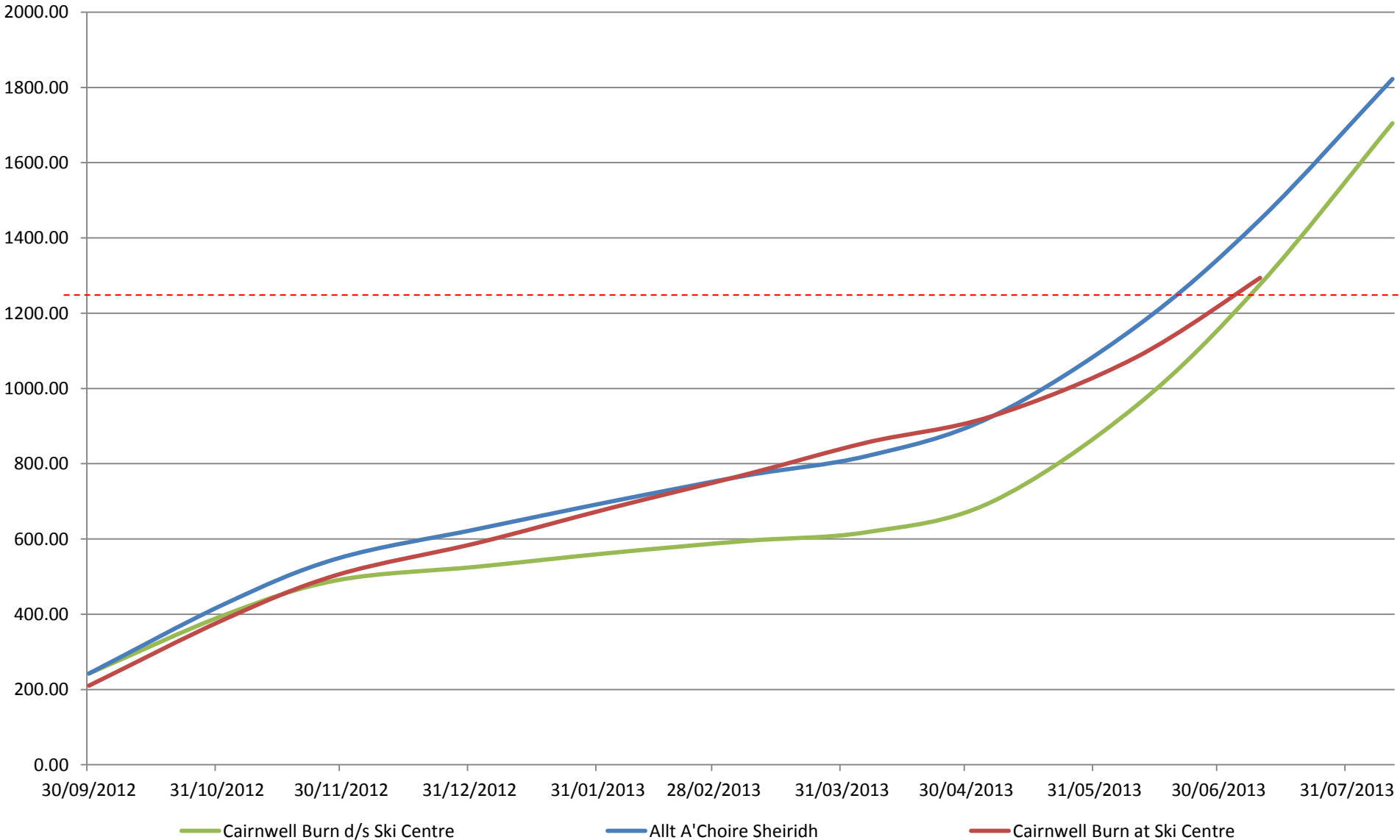
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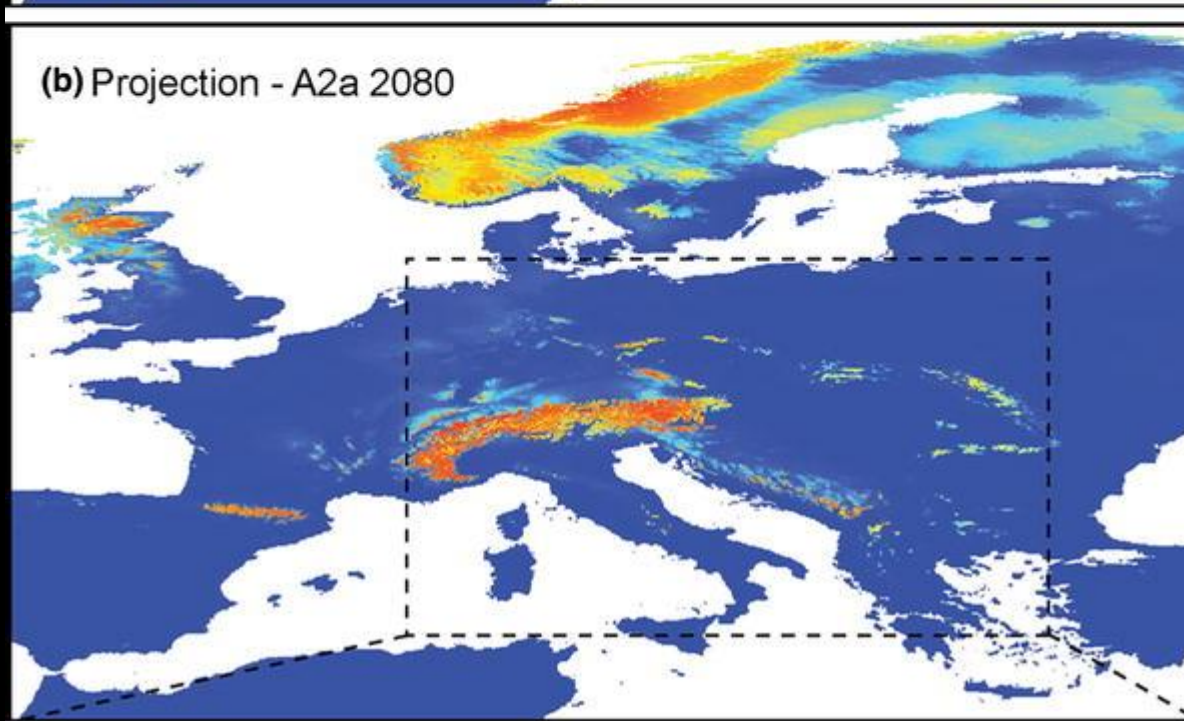
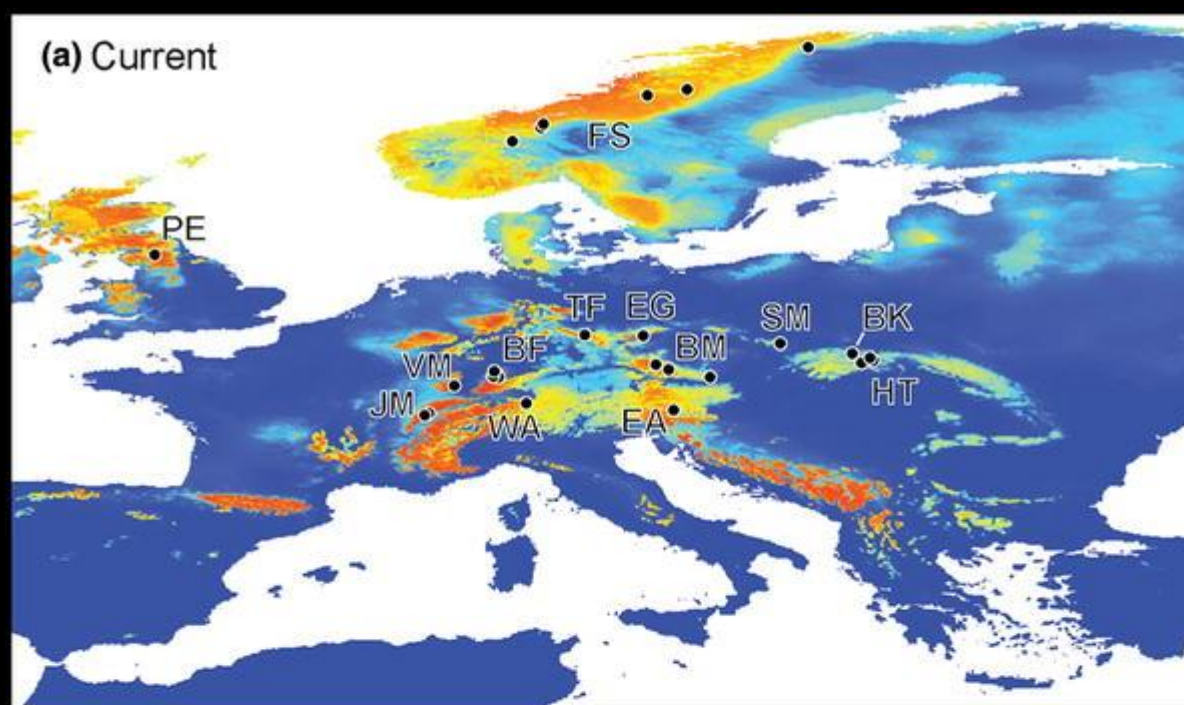
5

Growth of *Ameletus inopinatus*

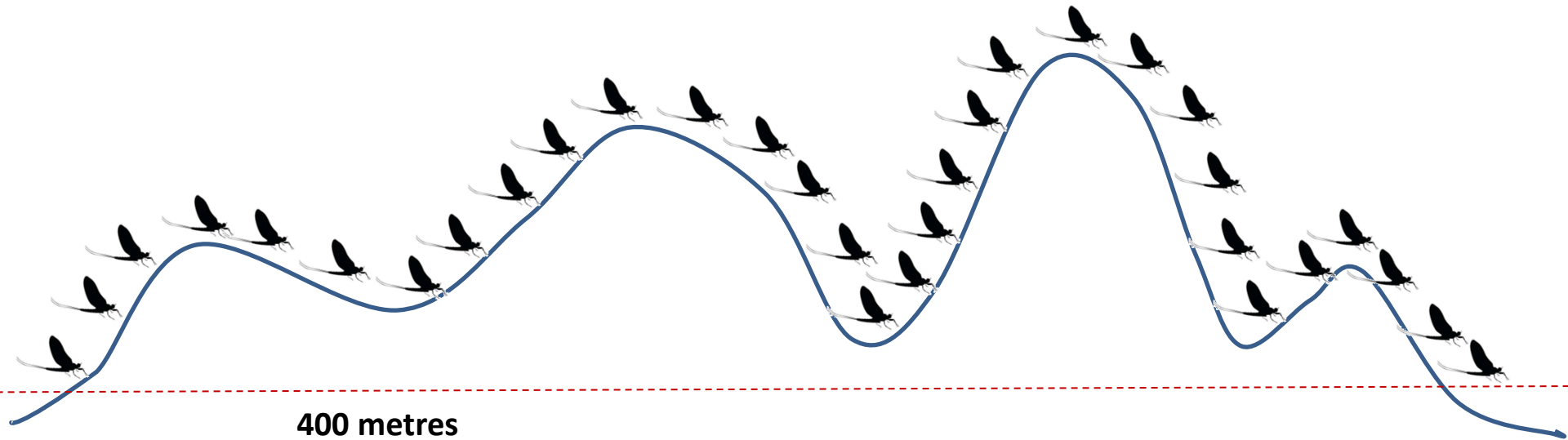


Degree days

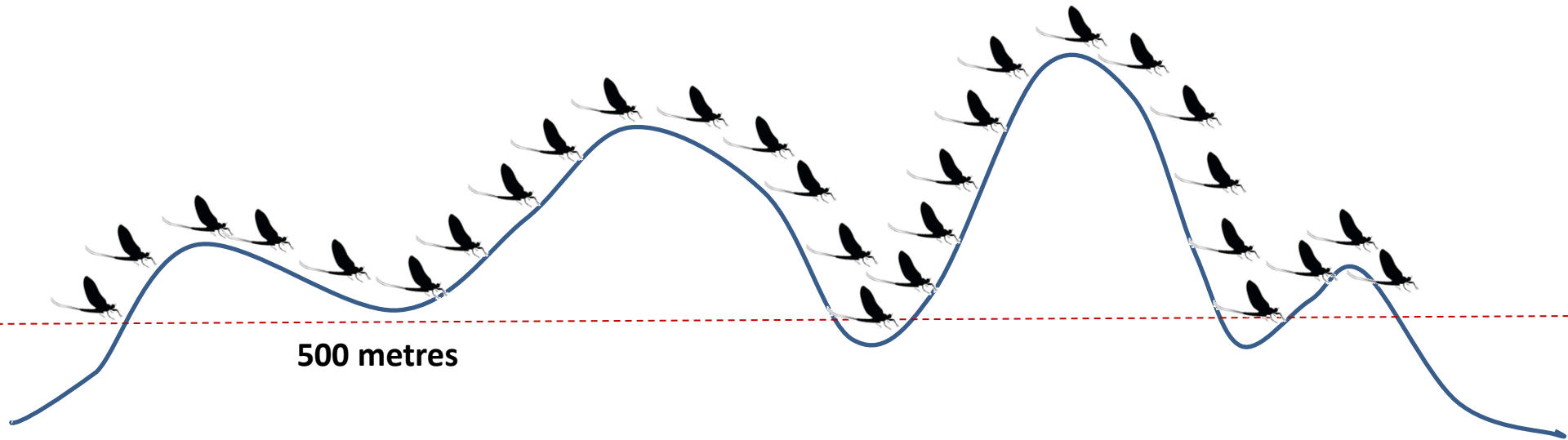




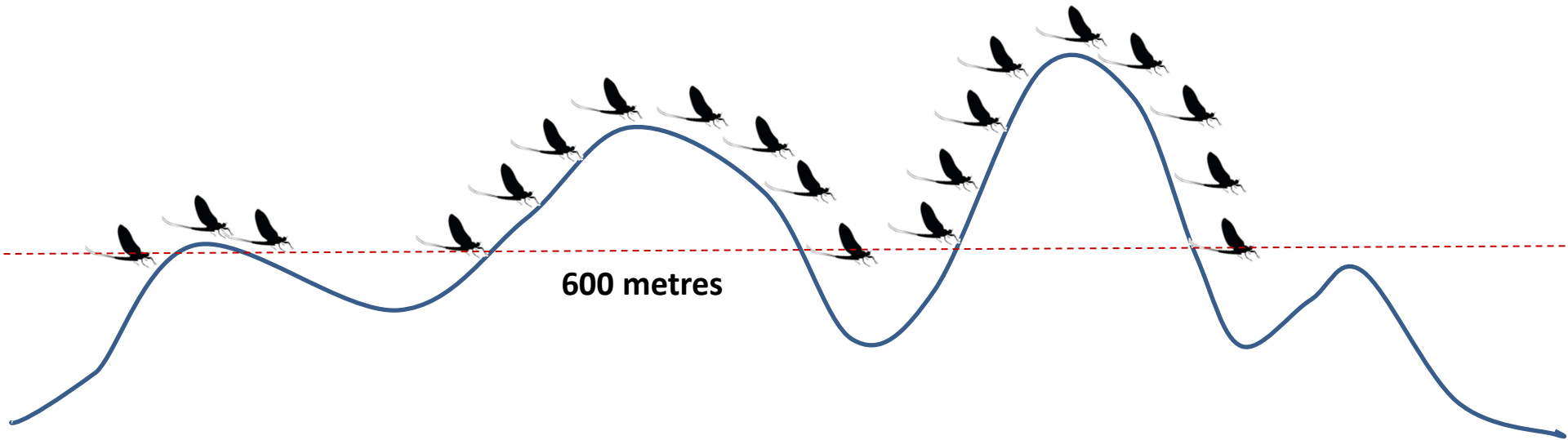
Climate space



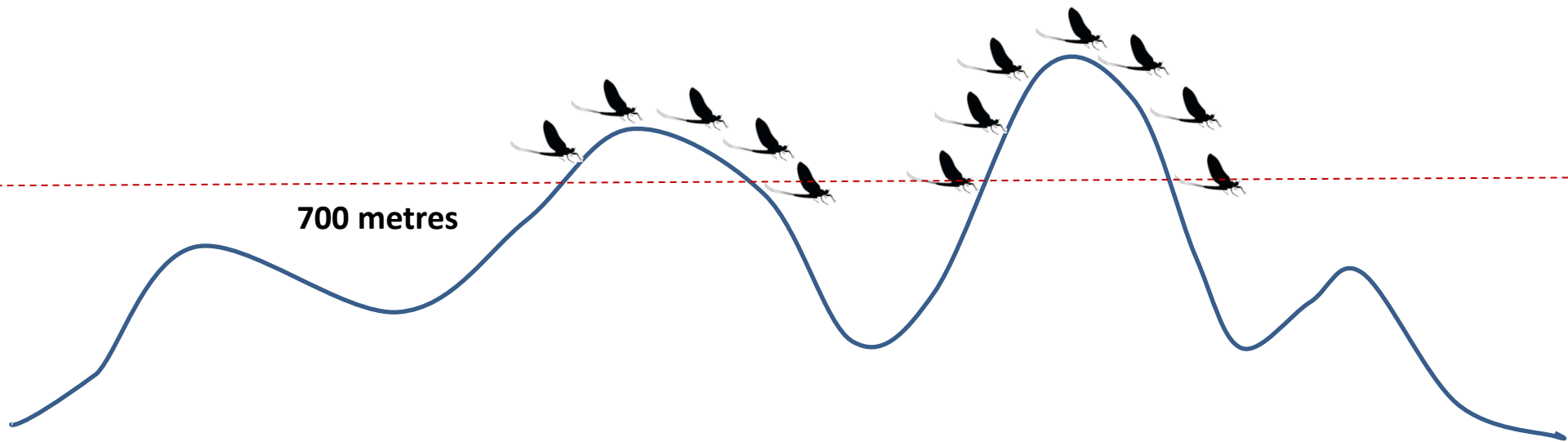
Climate space

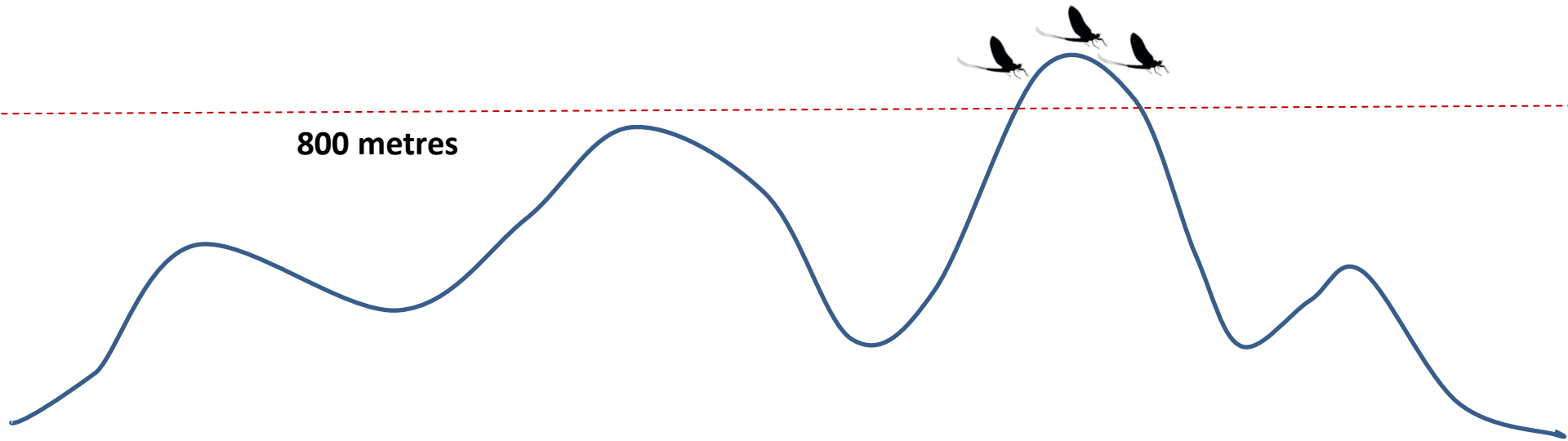


Climate space



Climate space

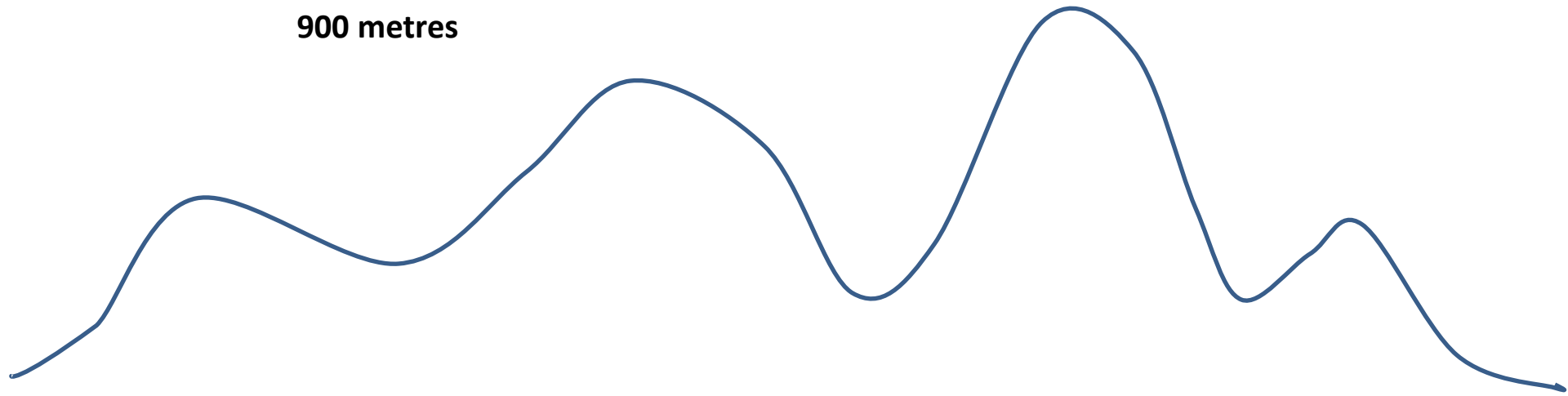






Climate space

900 metres



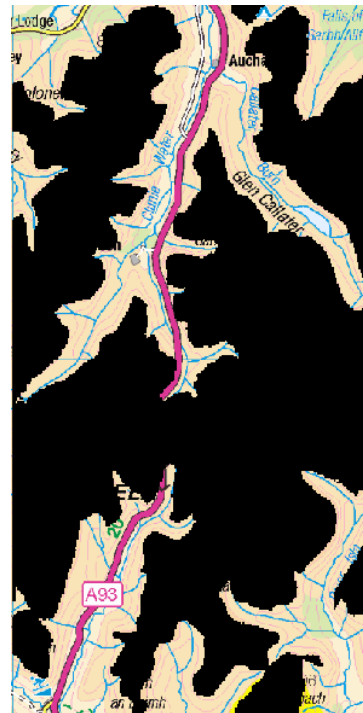
Climate space



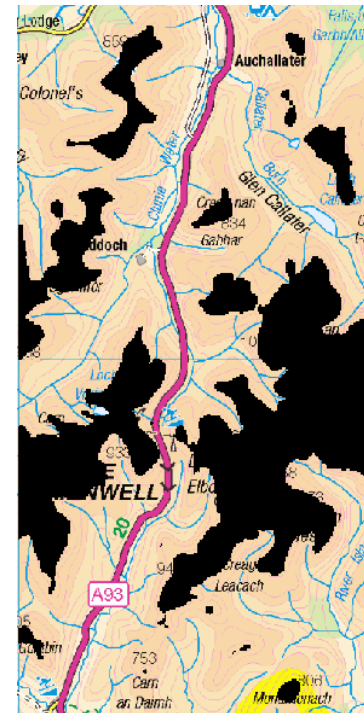
100% suitable
126km (100%)



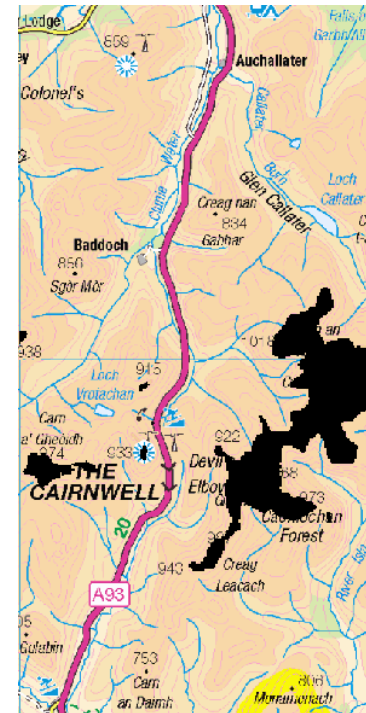
450 m ASL
90% suitable
79km (63%)



600 m ASL
63% suitable
33km (26%)

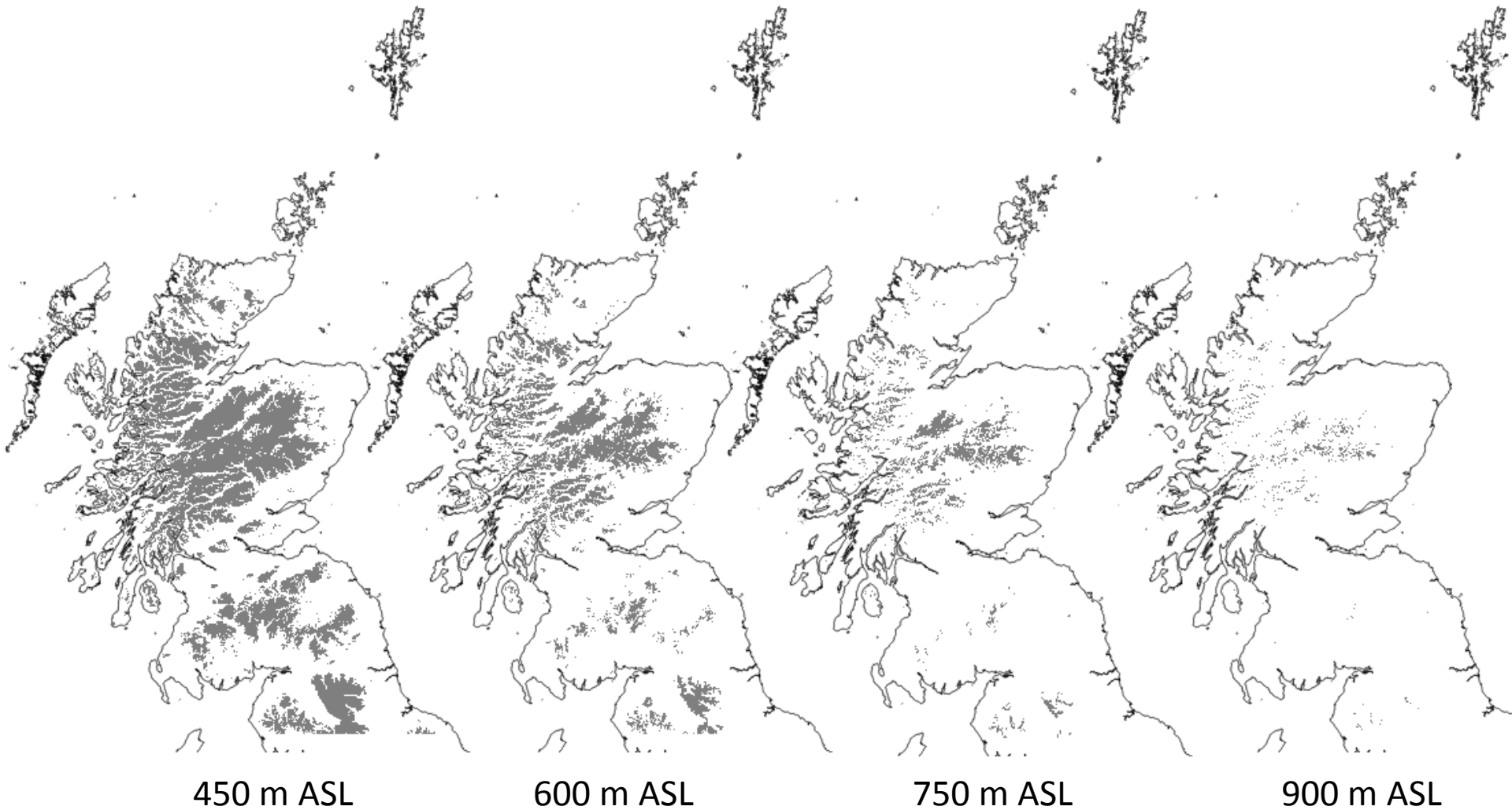


750 m ASL
25% suitable
7km (6%)



900 m ASL
6% suitable
3km (3%)

Climate space



marinescotland

TOPIC SHEET NUMBER 91

V2



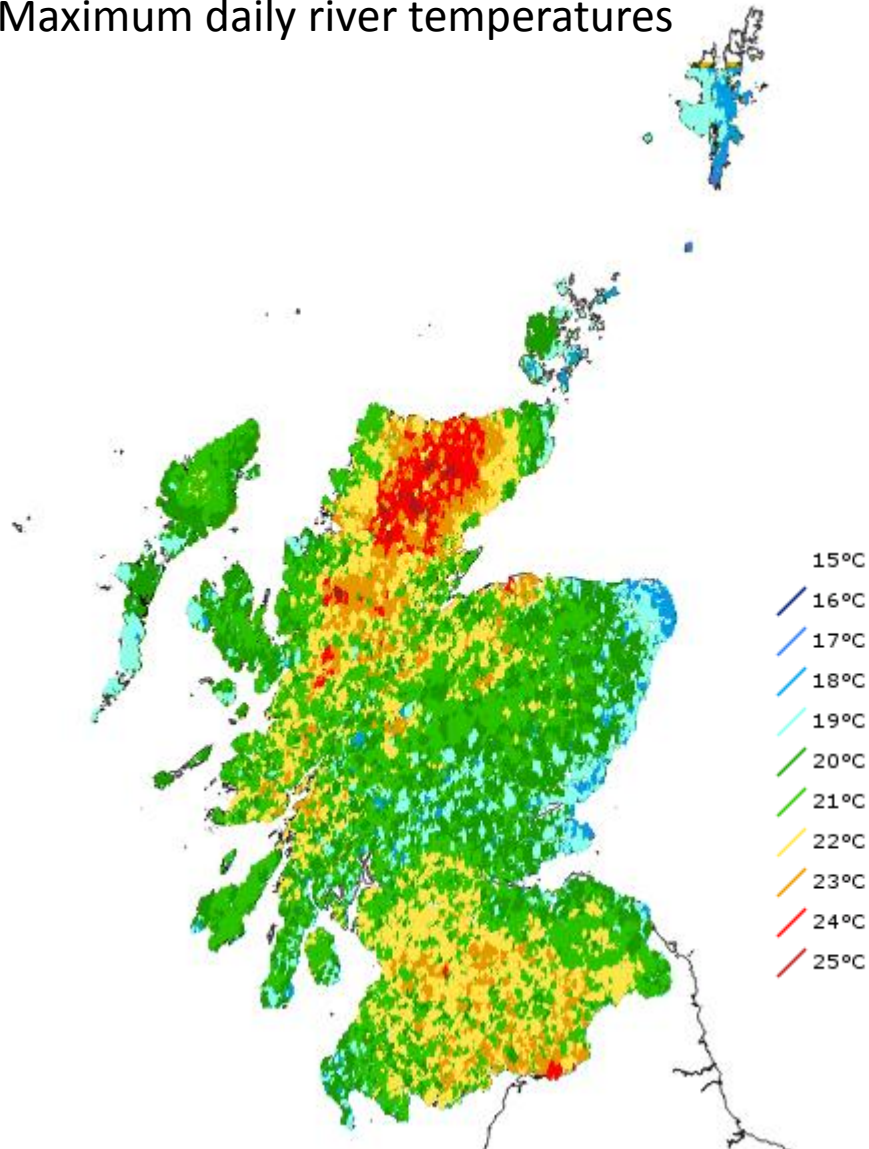
Scottish Government
Riaghaltas na h-Alba
gov.scot

WHERE SHOULD WE PLANT TREES TO PROTECT RIVERS FROM HIGH WATER TEMPERATURES?

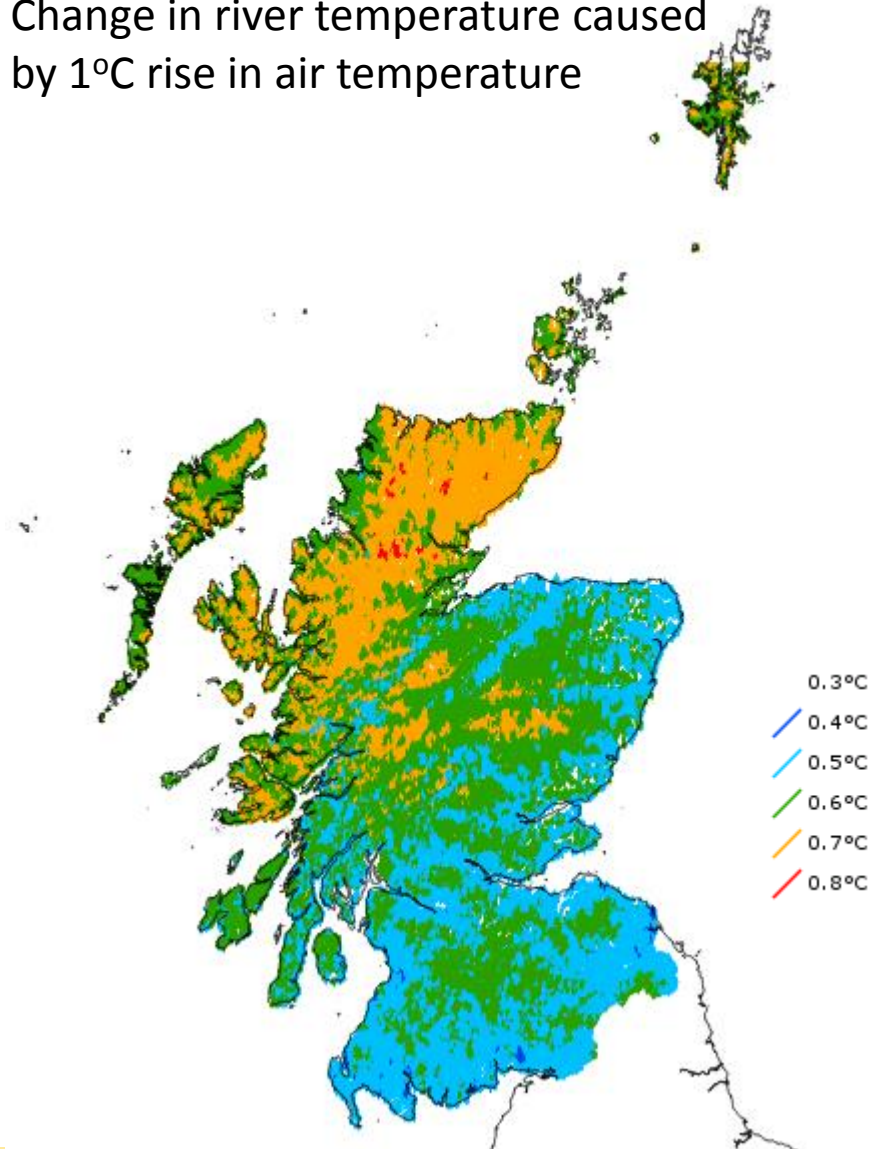


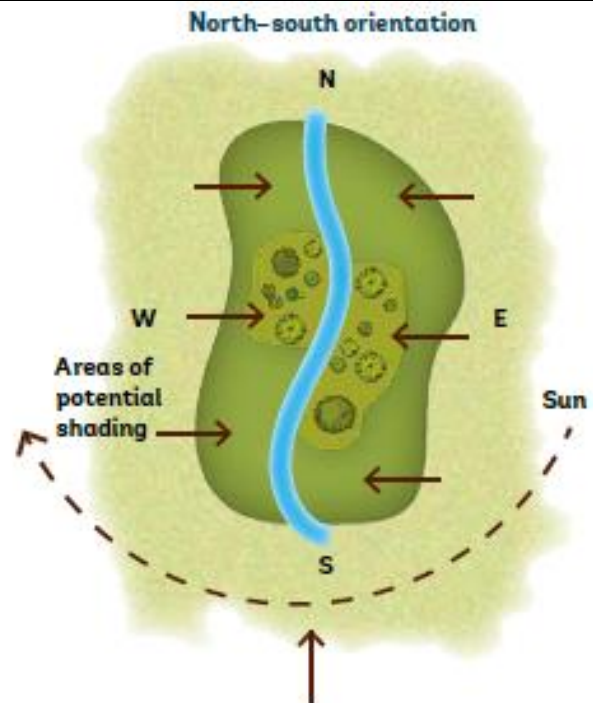
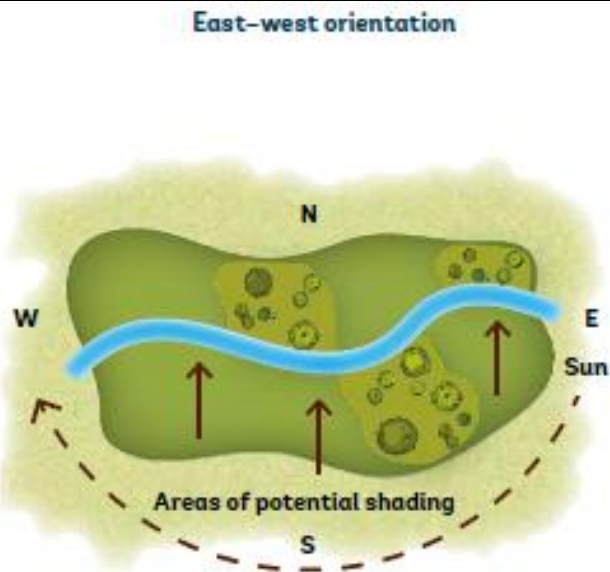
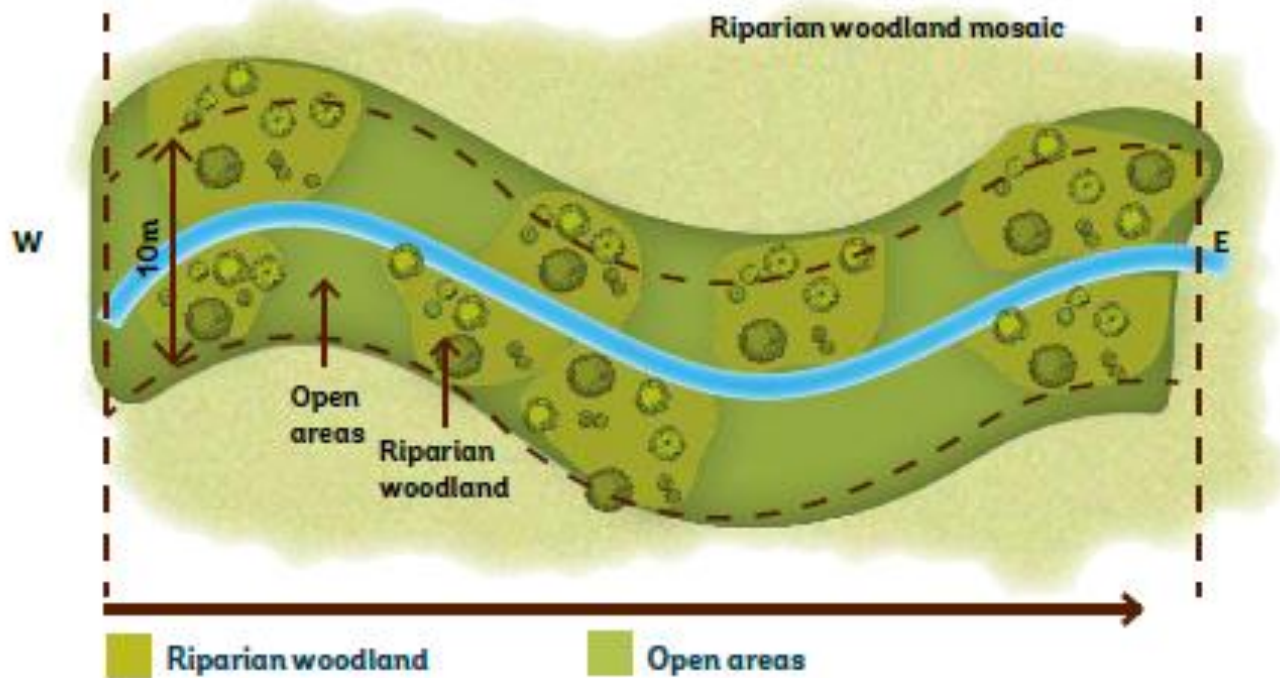
Keeping cool

Maximum daily river temperatures



Change in river temperature caused by 1°C rise in air temperature





Thermal Orthomosaic 2: 12th July (12pm)

Legend



Validation
Temperature (C)



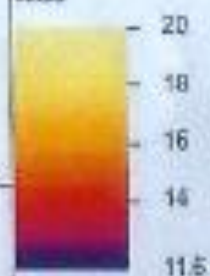
0 10 20
Meters



Aluminum DCP

Temperature (C)

Value



Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
False Easting: 410,000.0000
False Northing: -100,000.0000
Central Meridian: -2.0000
Scale Factor: 0.9996
Latitude Of Origin: 49.0000
Units: Meter



UNIVERSITY
OF ABERDEEN

Author: Ryan Peck

Date: 27/07/2016



Practical Guidance

Keeping Rivers Cool: A Guidance Manual

Creating riparian shade for
climate change adaptation

February 2016



Keeping Rivers Cool

Getting ready for climate change by
creating riparian shade

V.2
01/10/12






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