



Falling into trap: not all insects are declining

Richard Harrington, Chris Shortall,
Dave Brooks, Jason Chapman

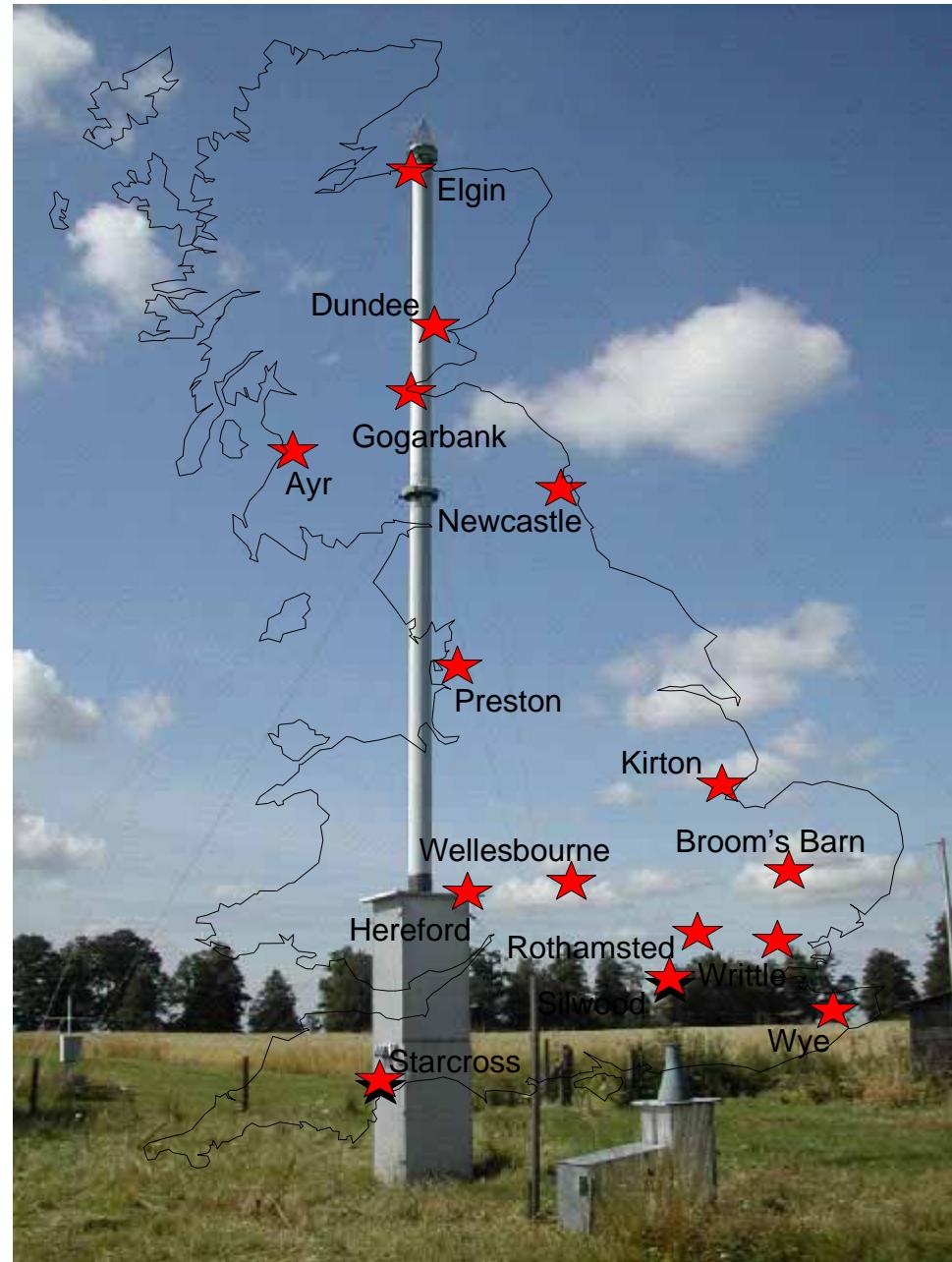




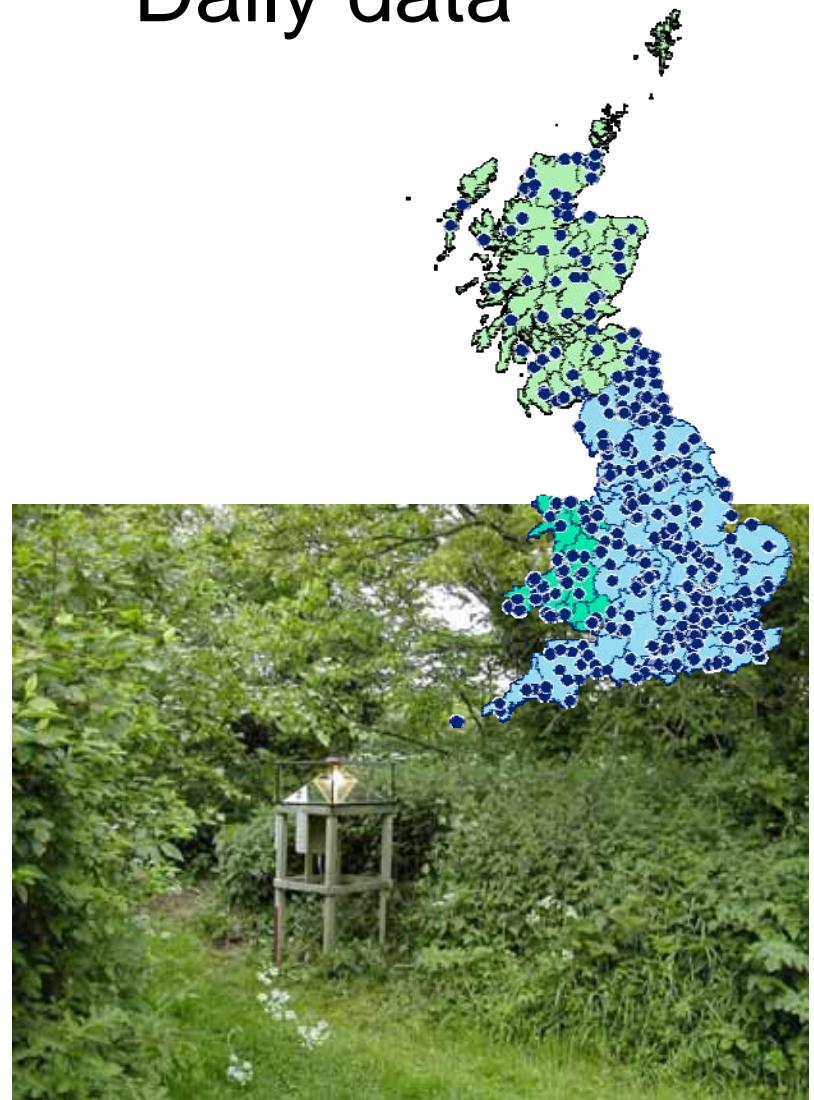


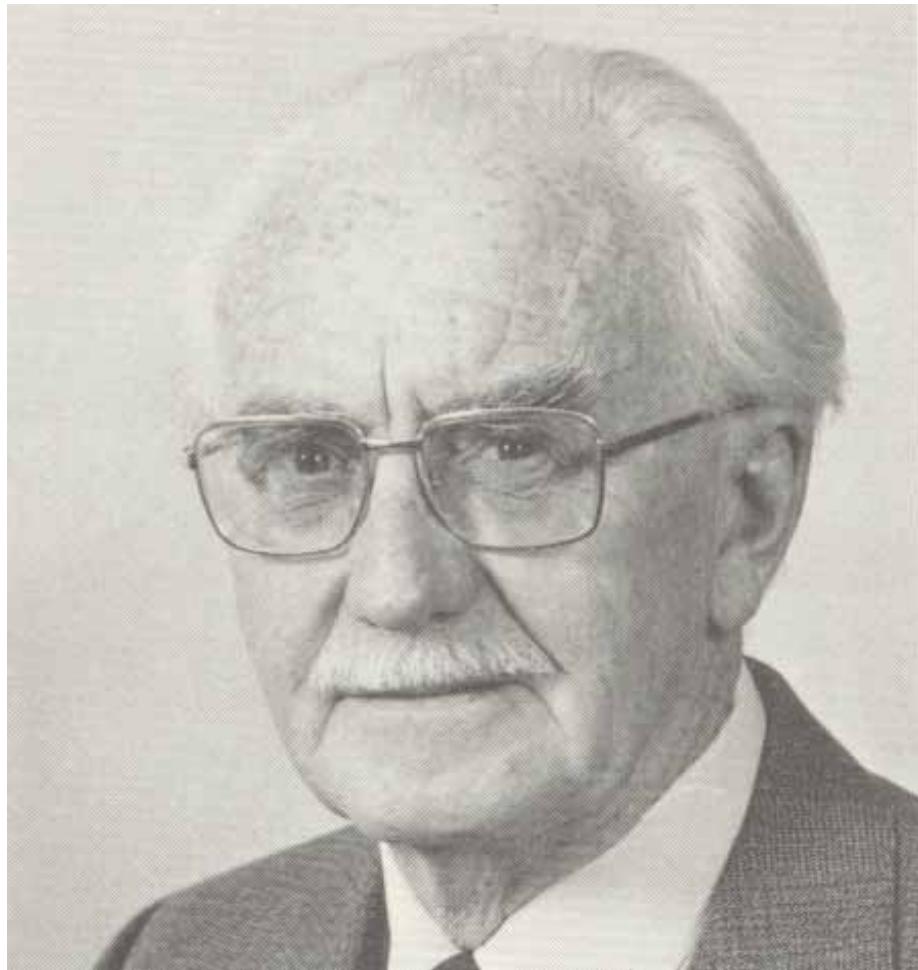
Long term data



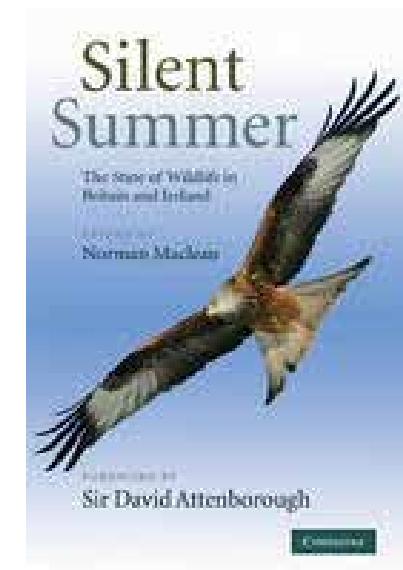
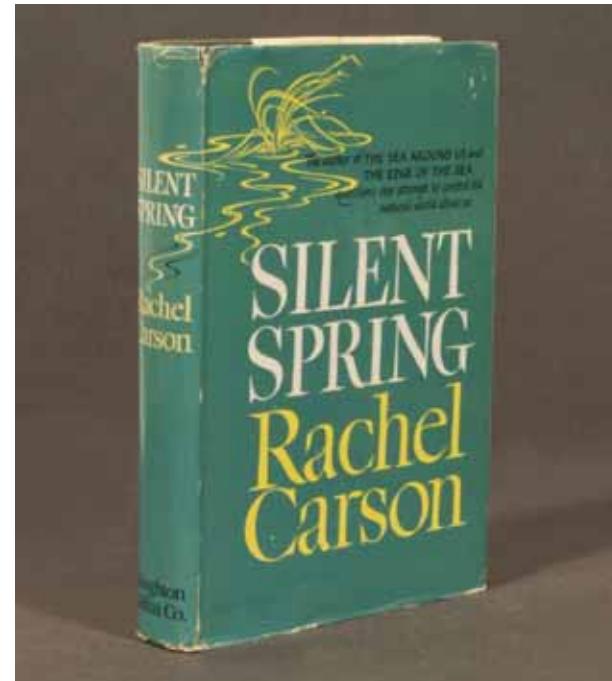


1965 – 2011+
Daily data



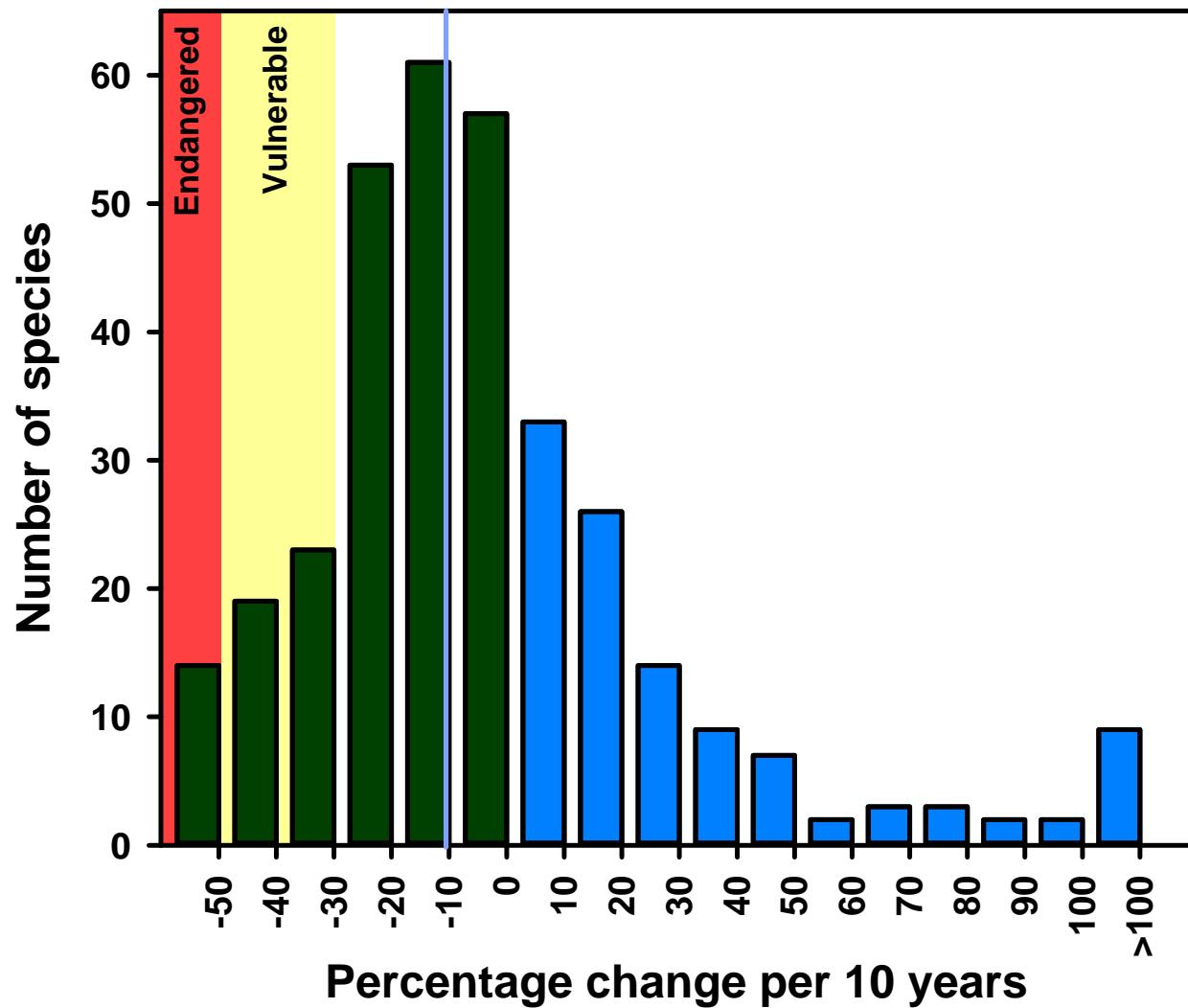


Roy Taylor
1924-2007

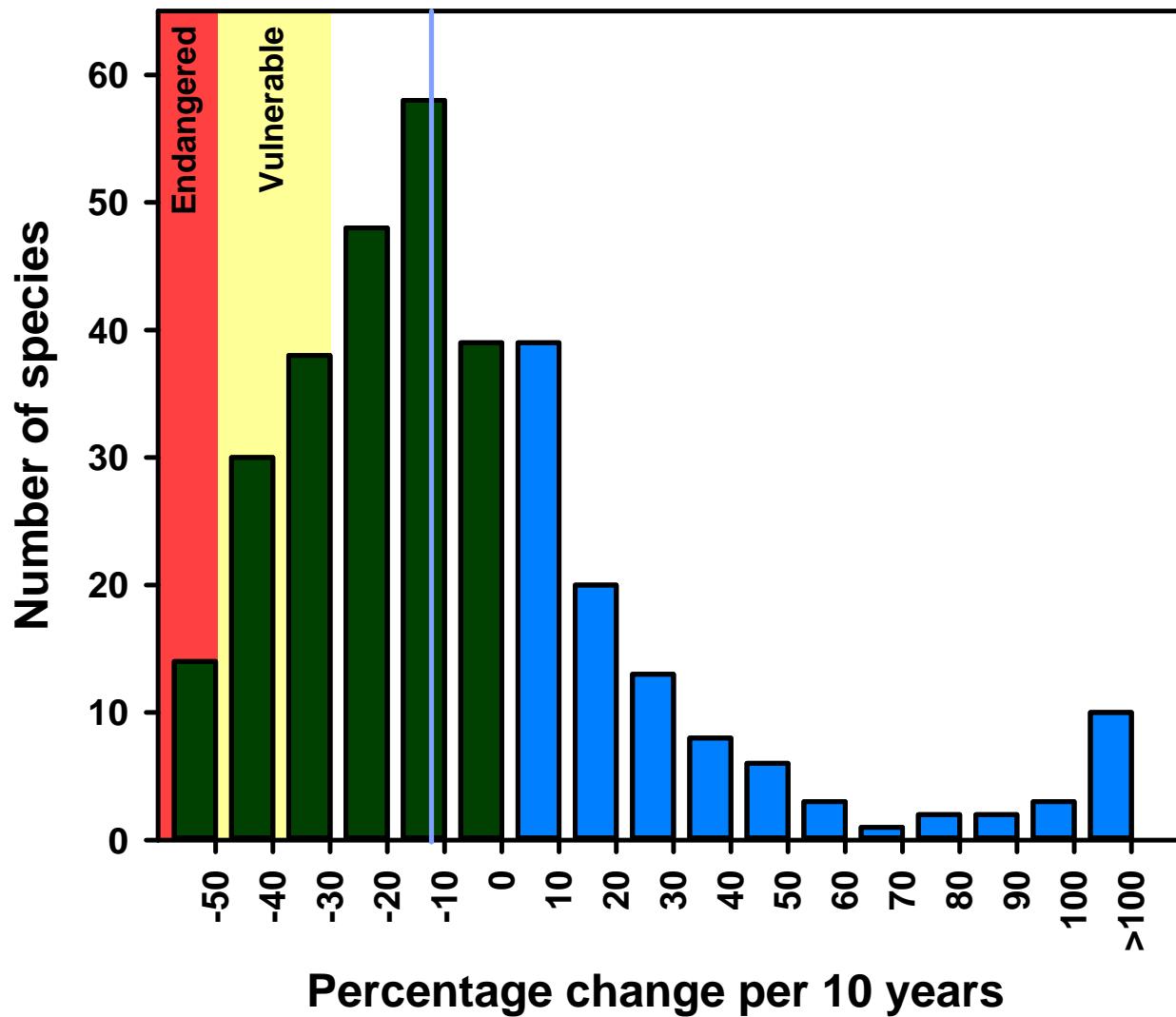




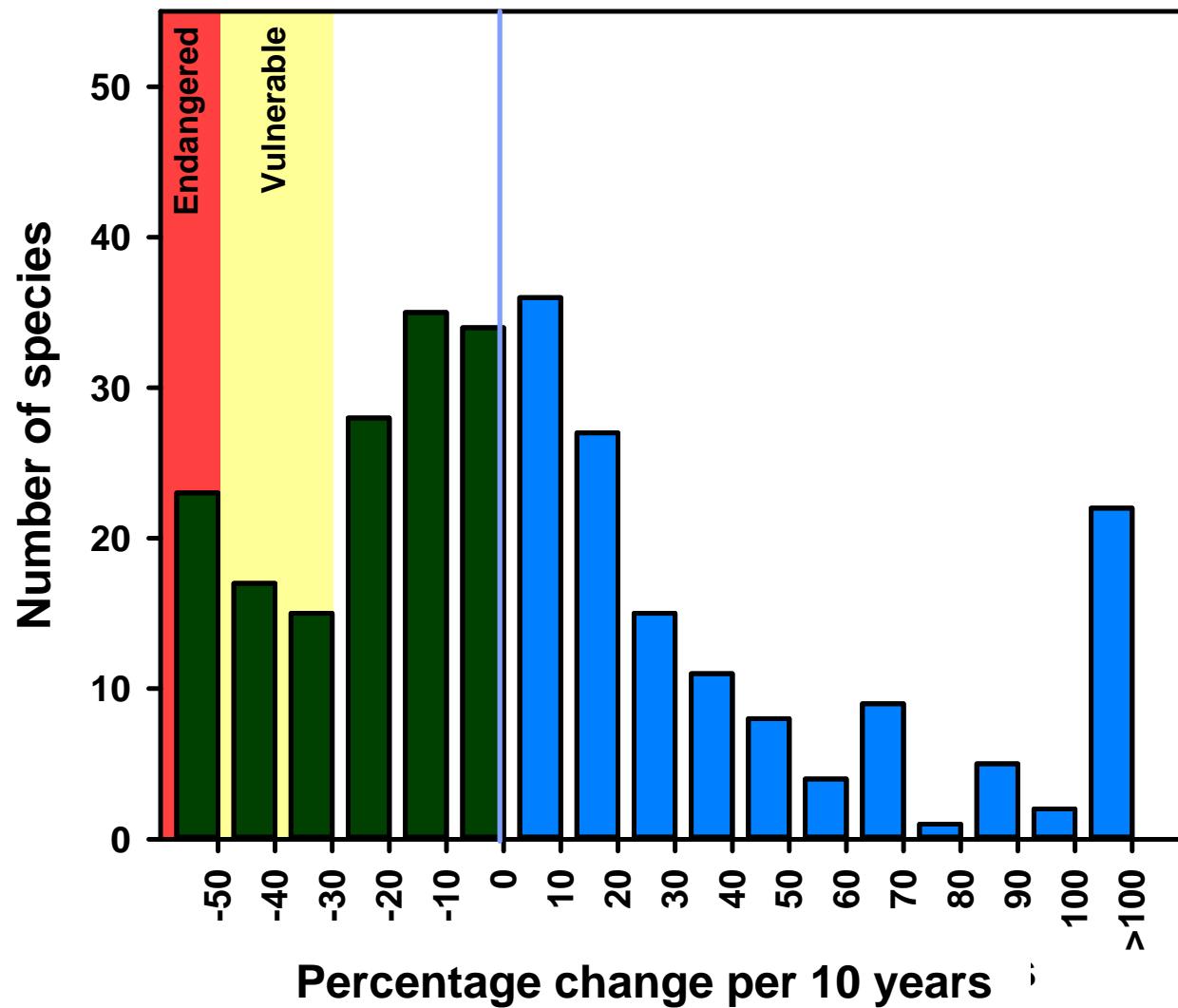
Frequency Distribution of Species Trends over 40 years in GB for 337 “Common” species



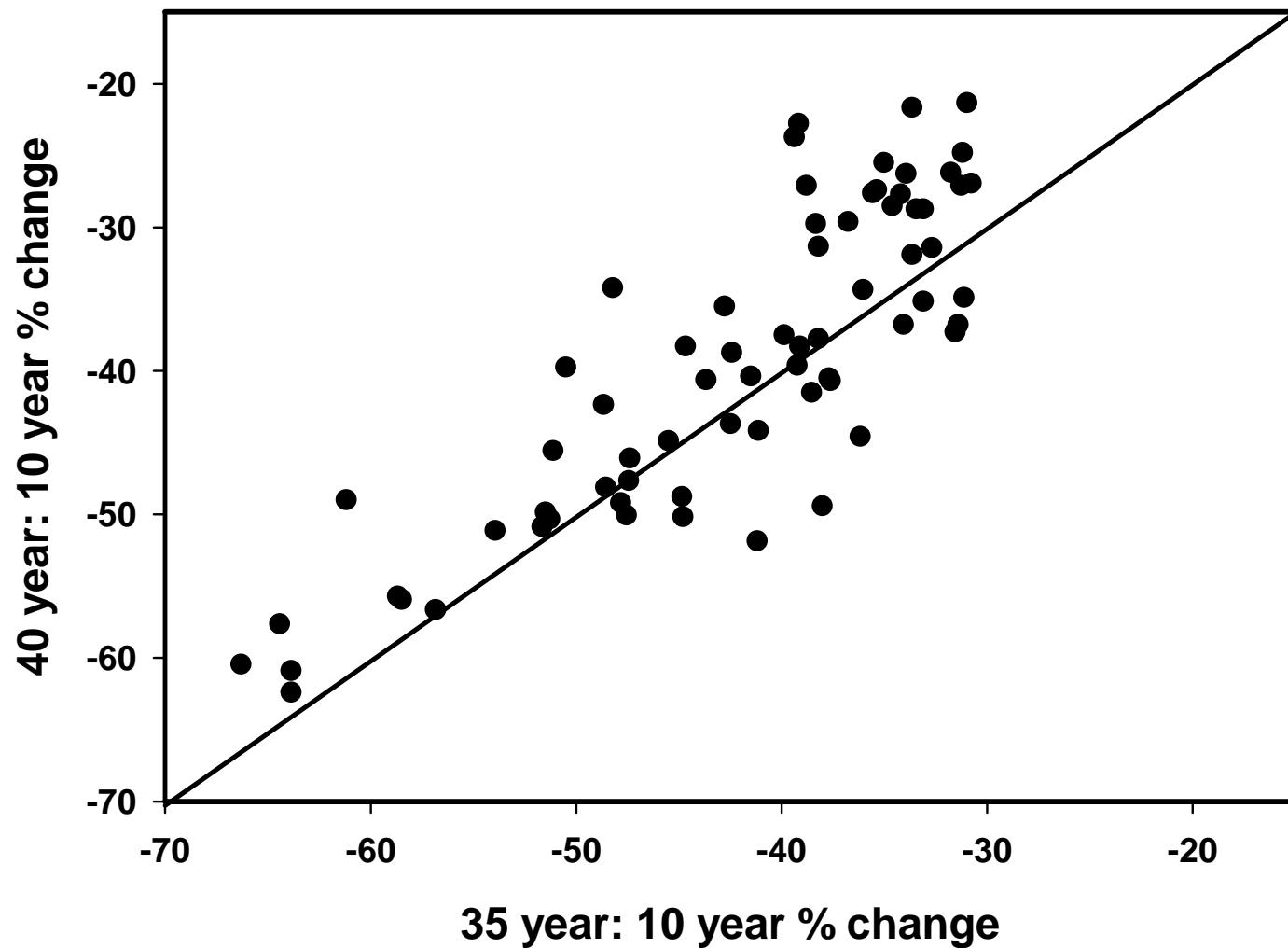
Southern GB



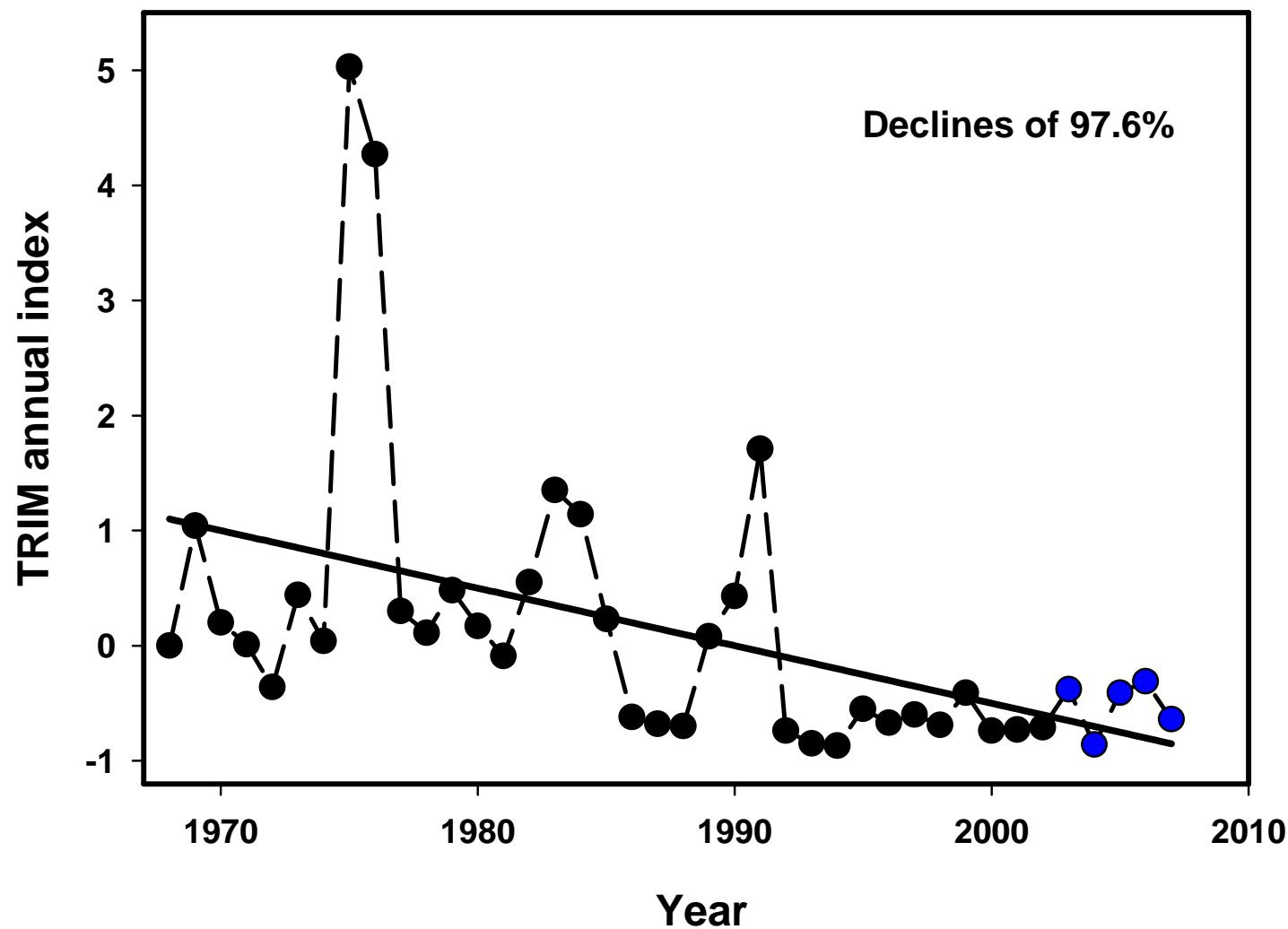
Northern GB



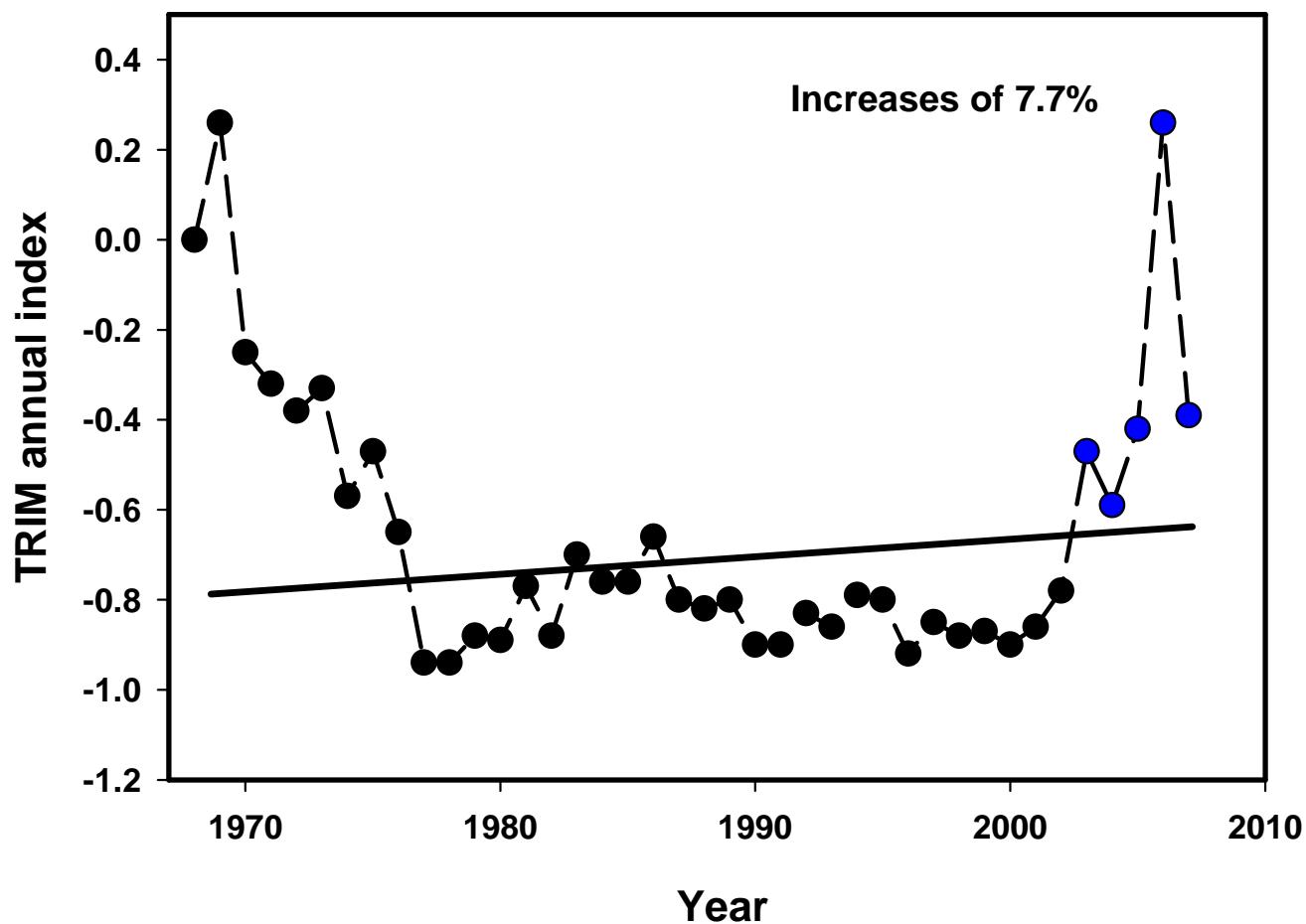
Previously Threatened spp. - GB



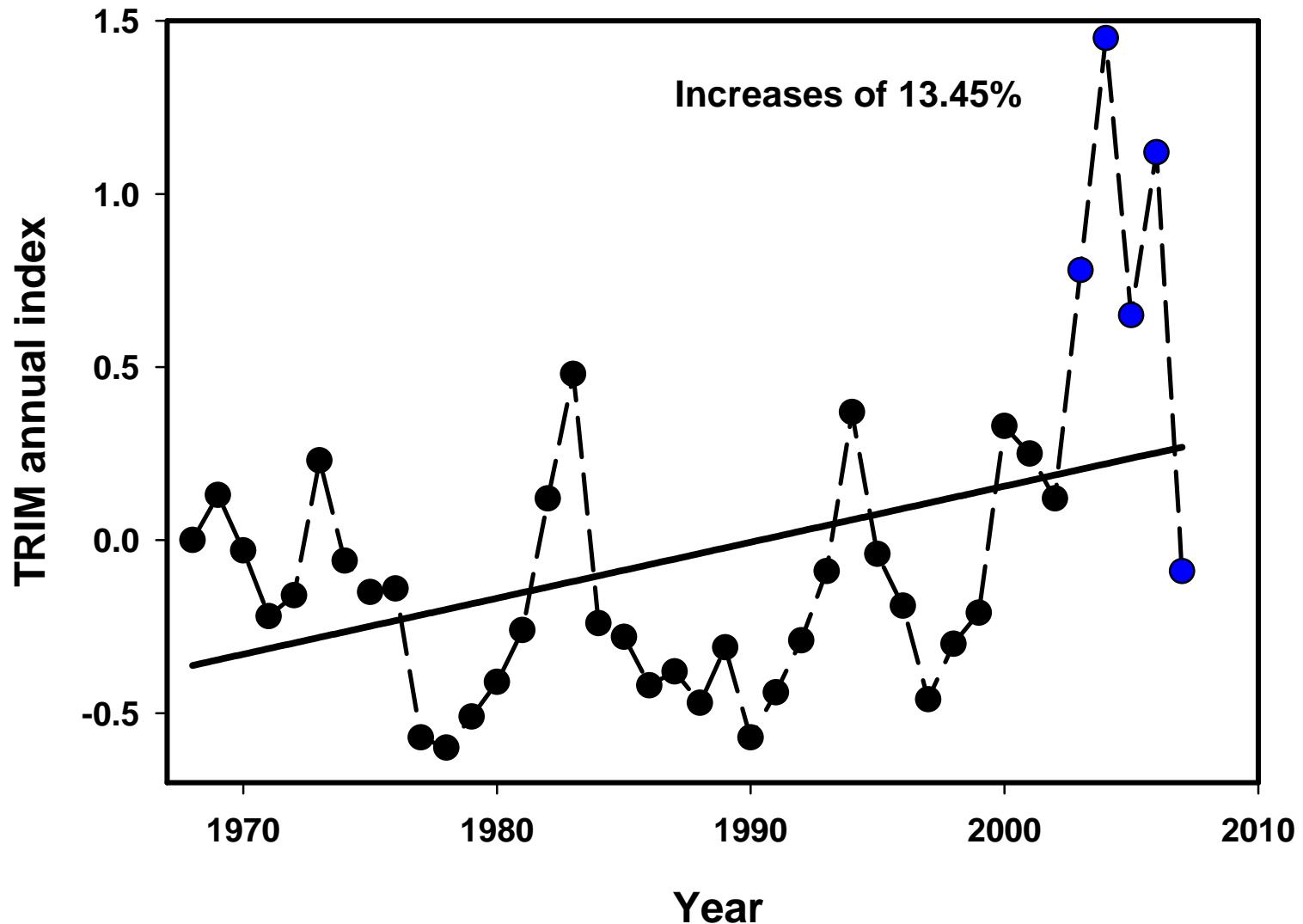
Dusky Thorn - National

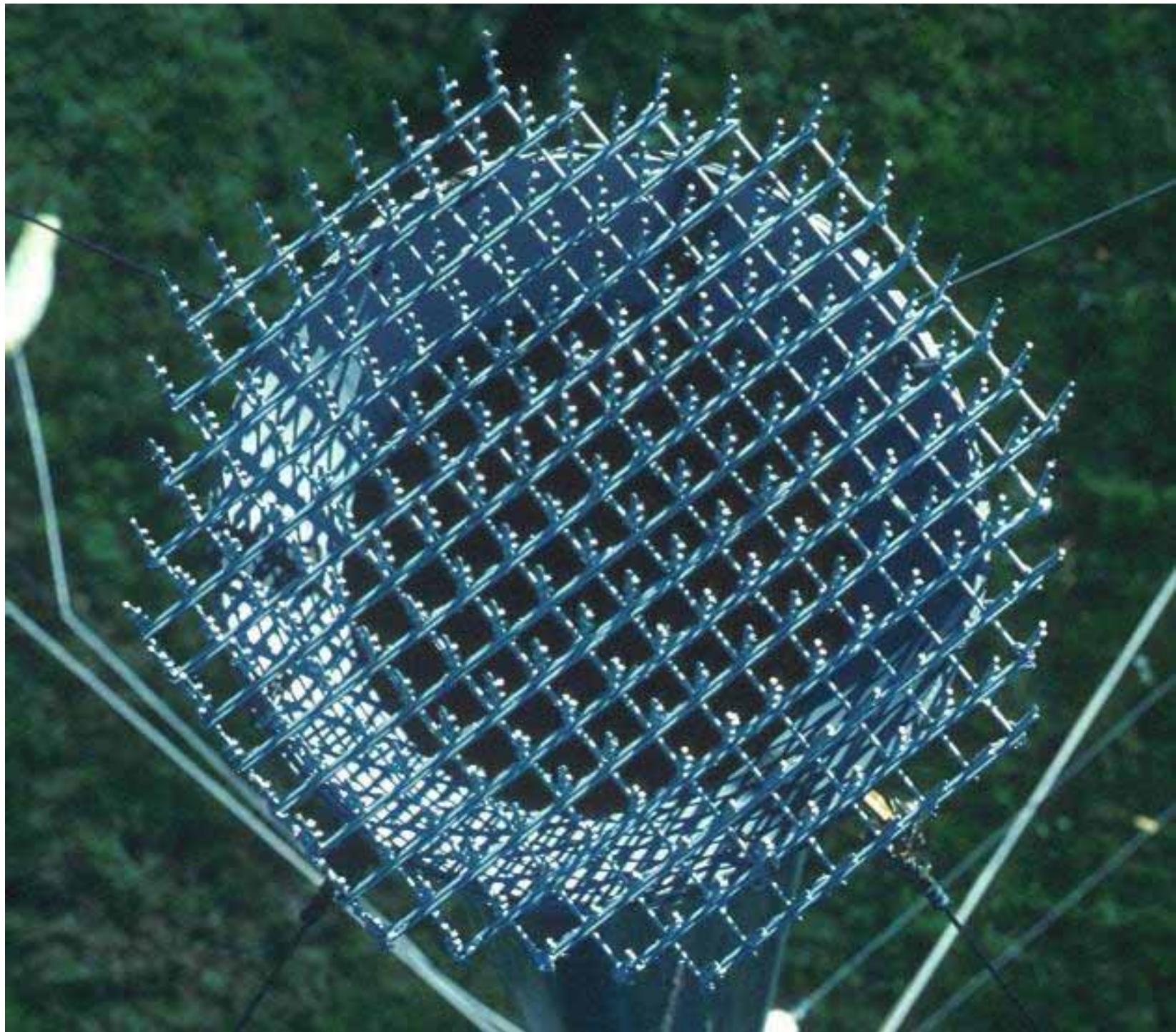


Sharp-angled Carpet - National



The Drinker - National







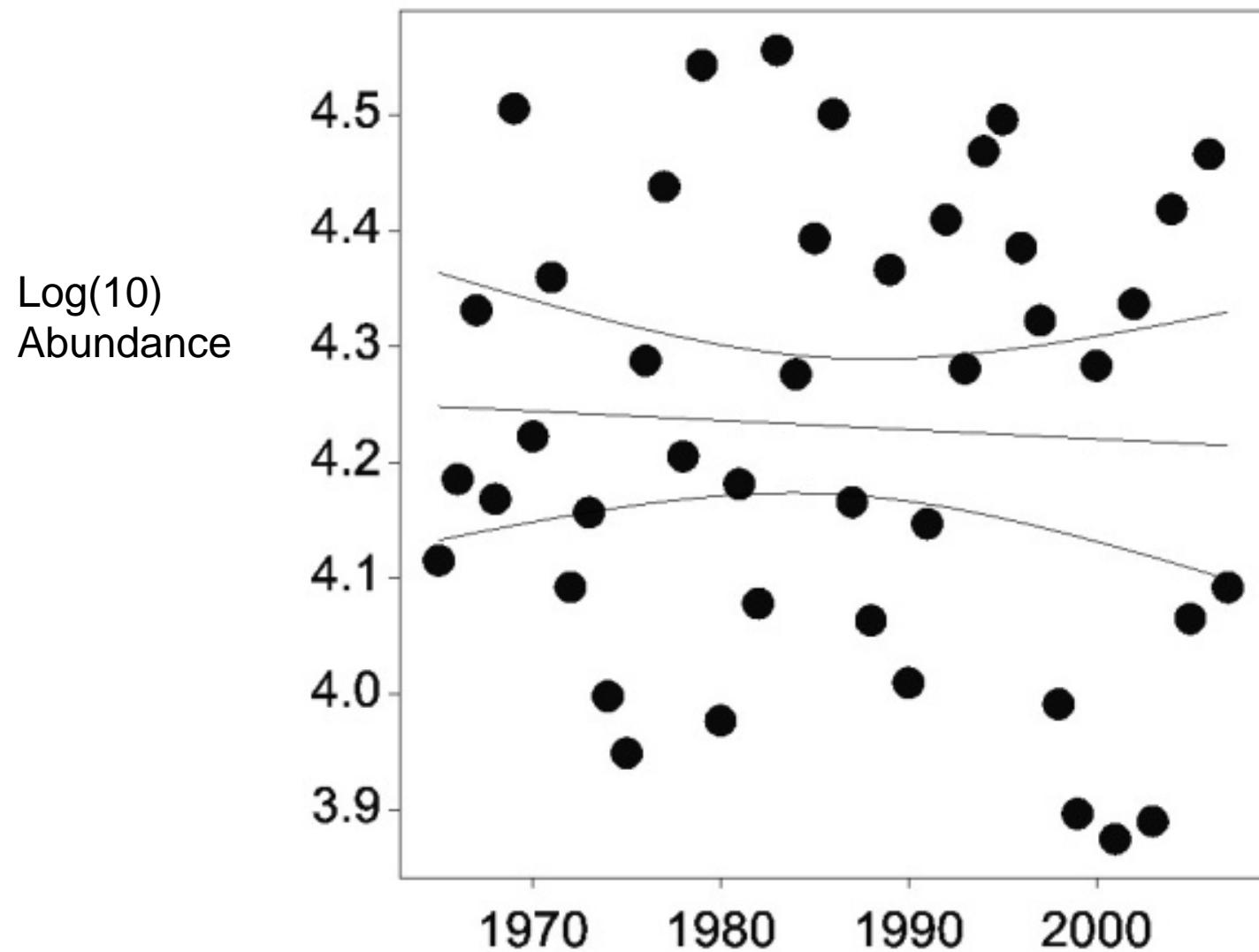




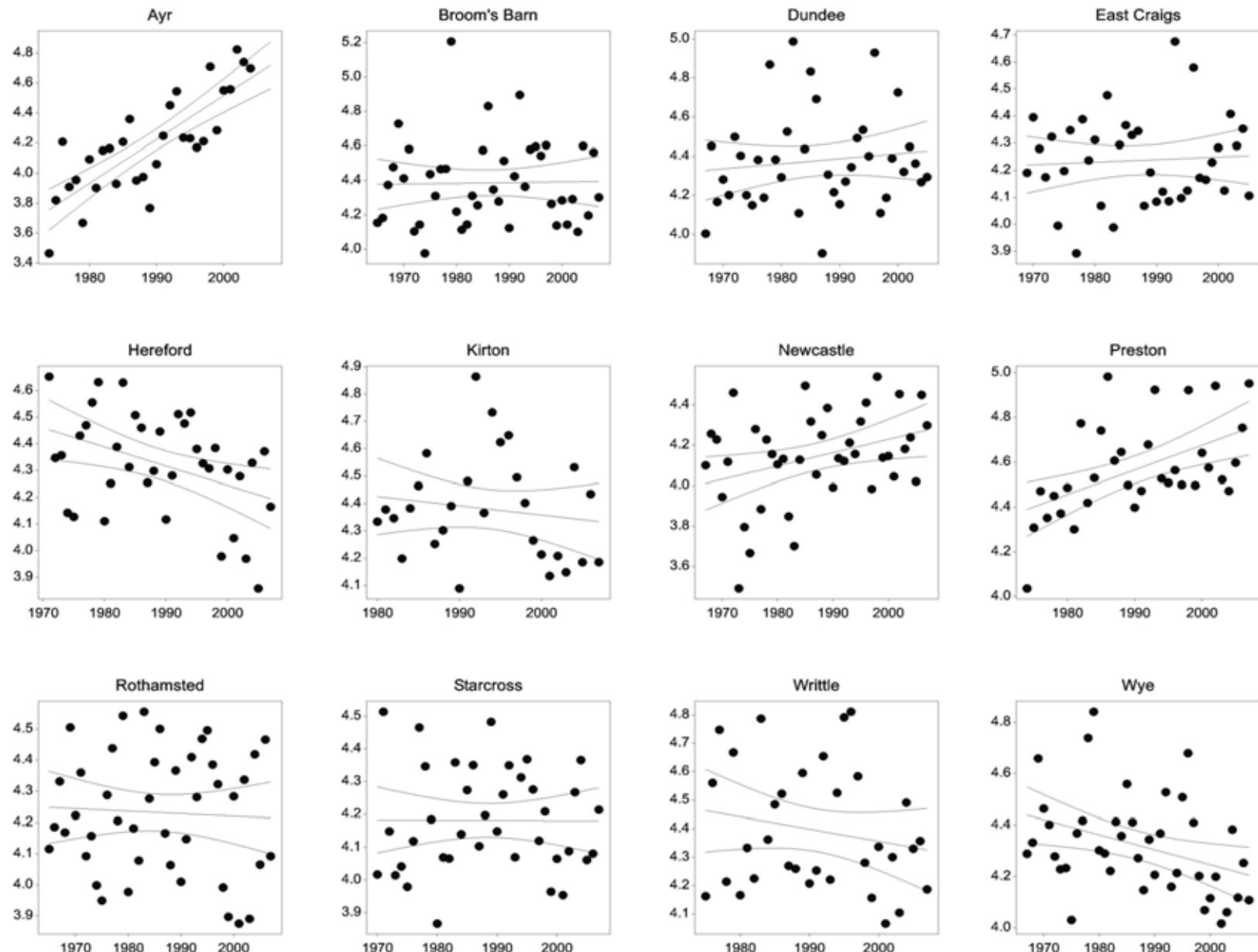




Rothamsted: all aphids

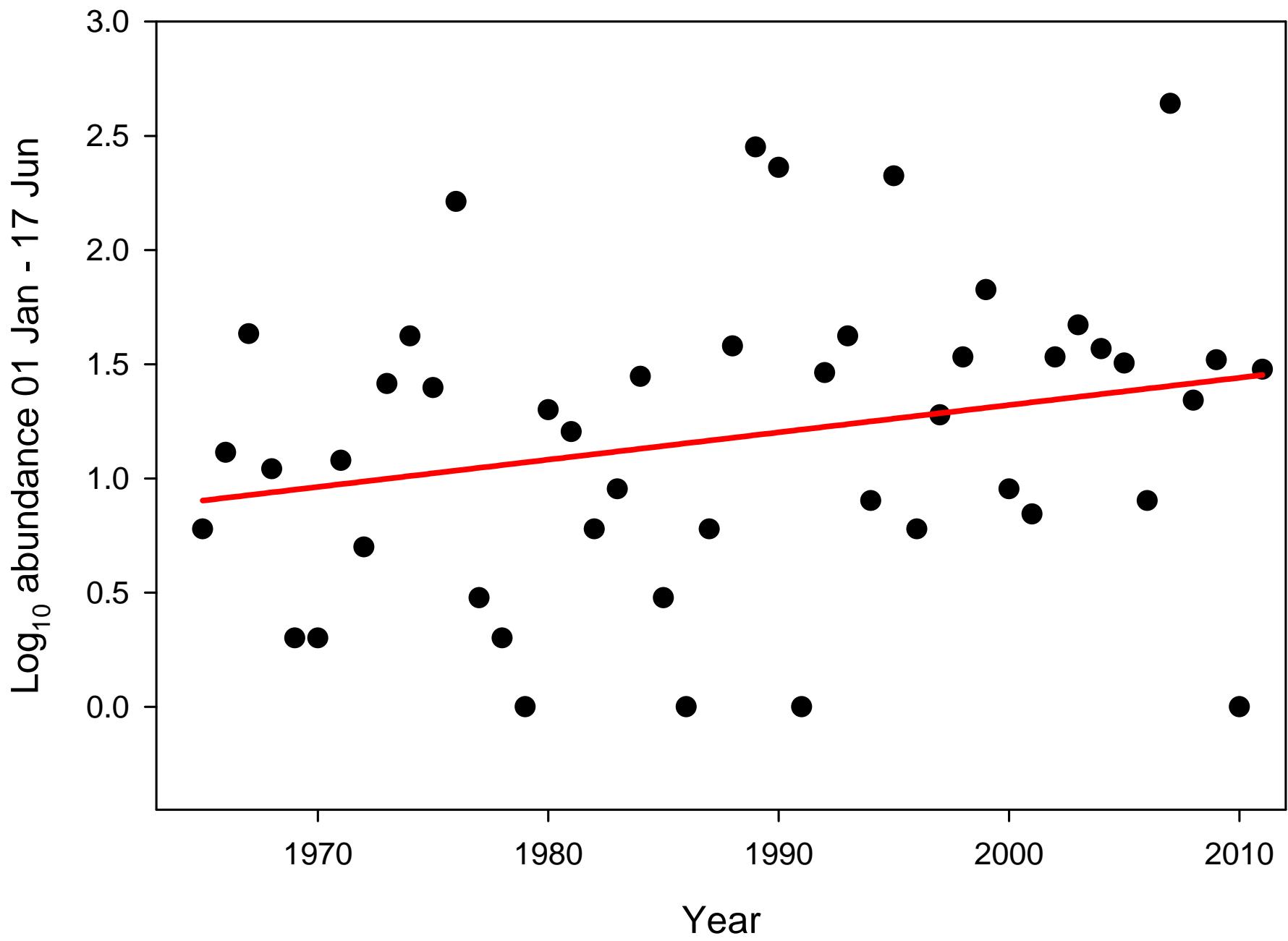


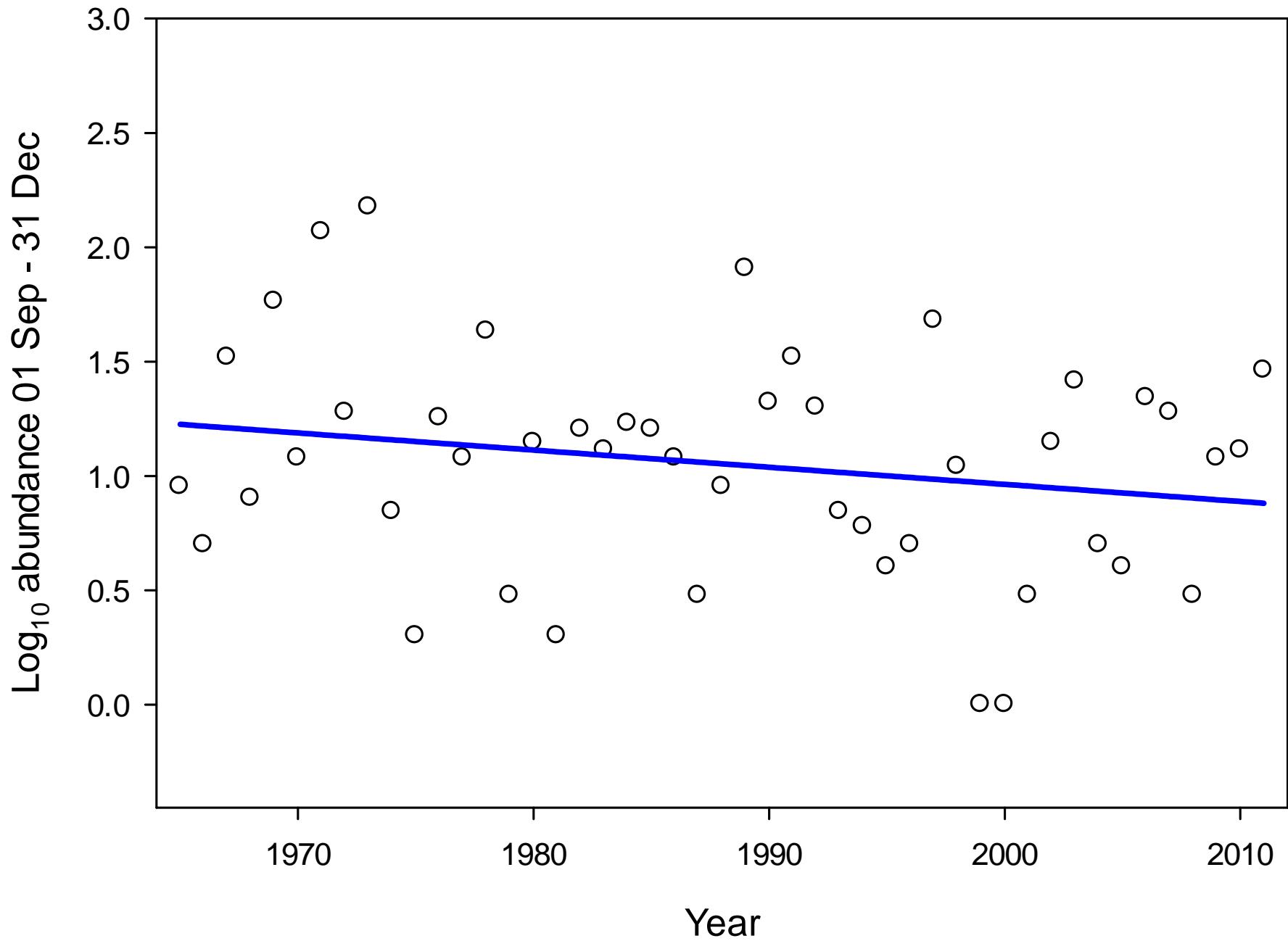
Trends in annual total aphid log abundance at 12 sites

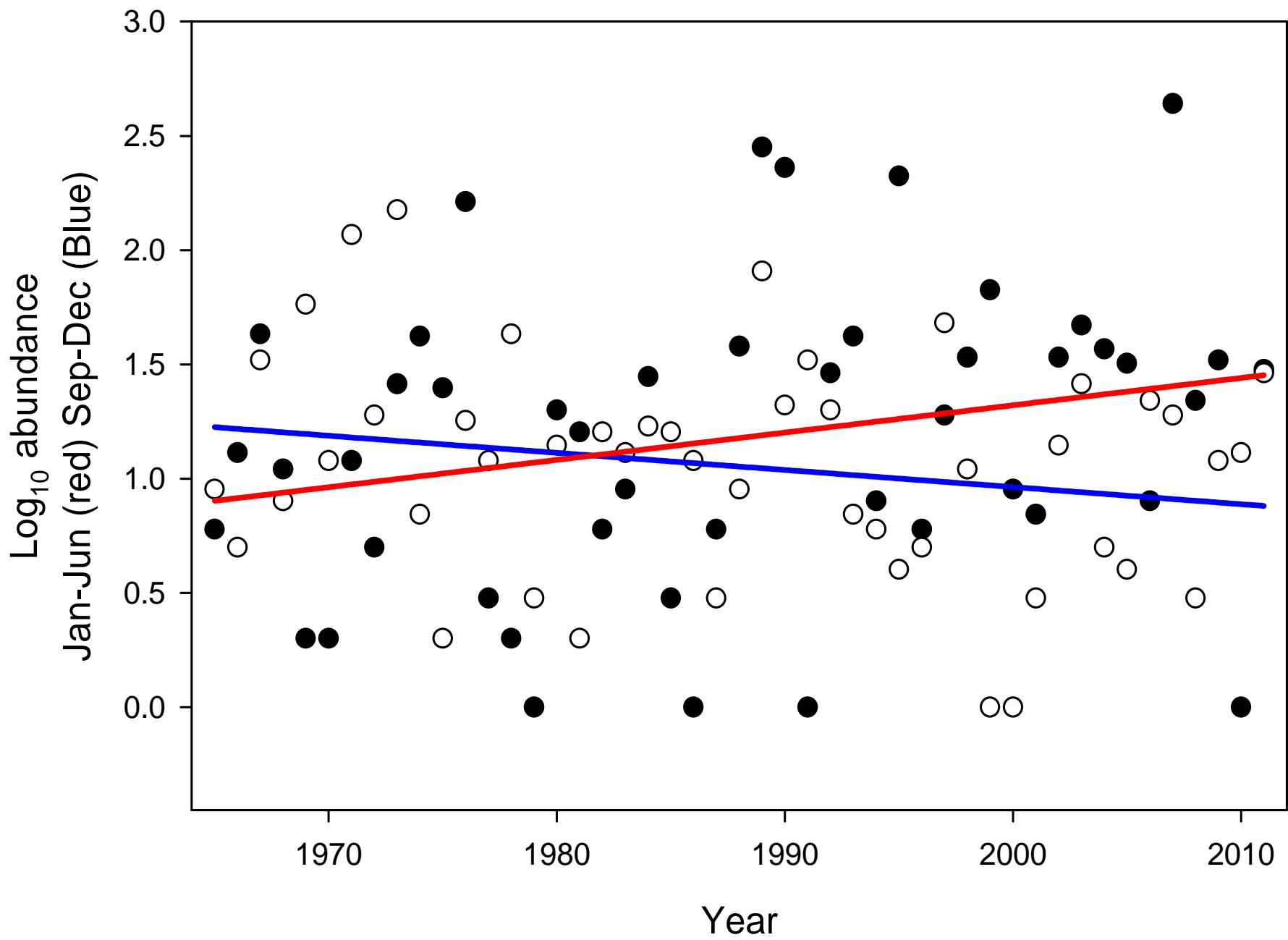




*Myzus
persicae*

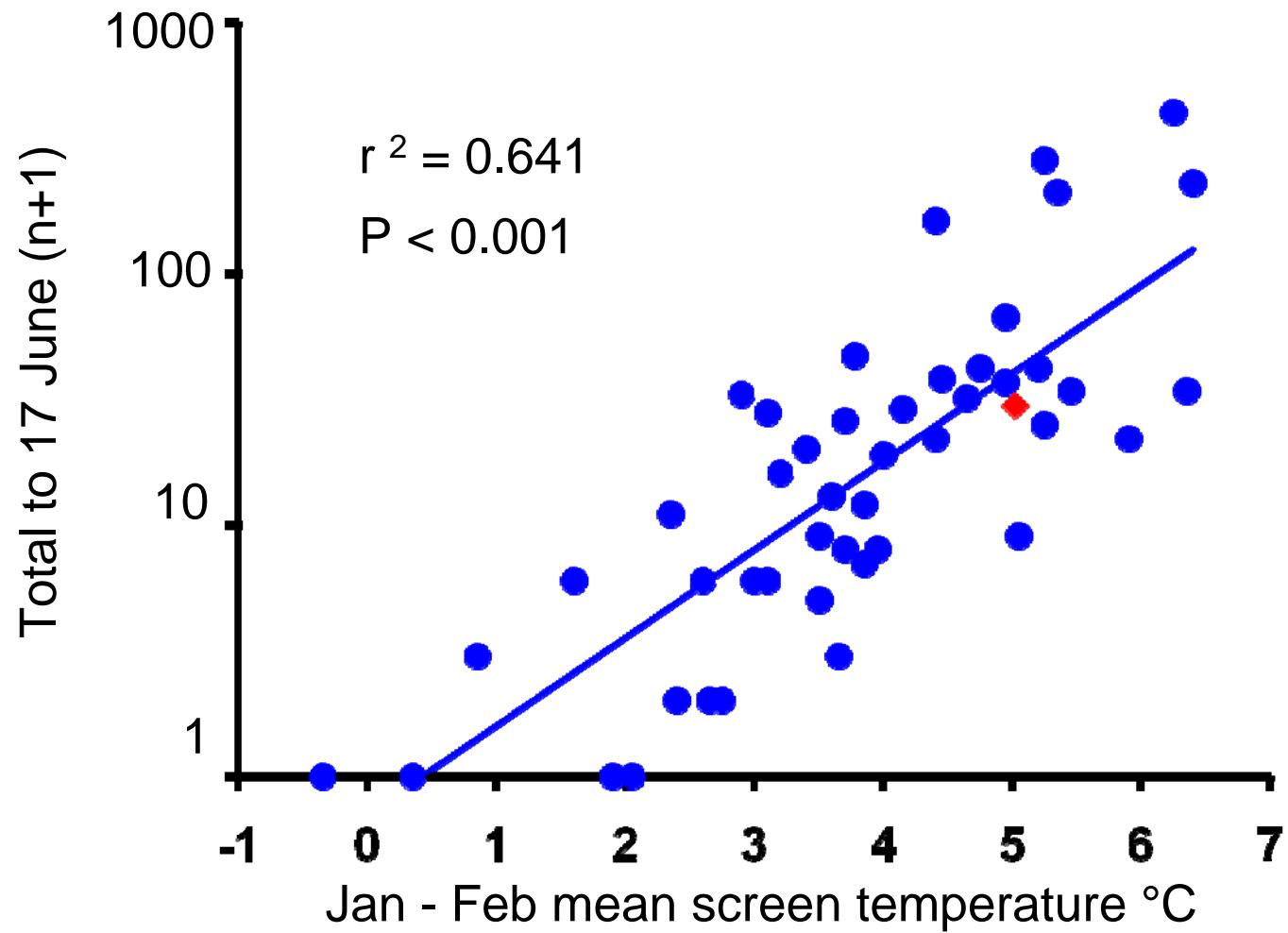






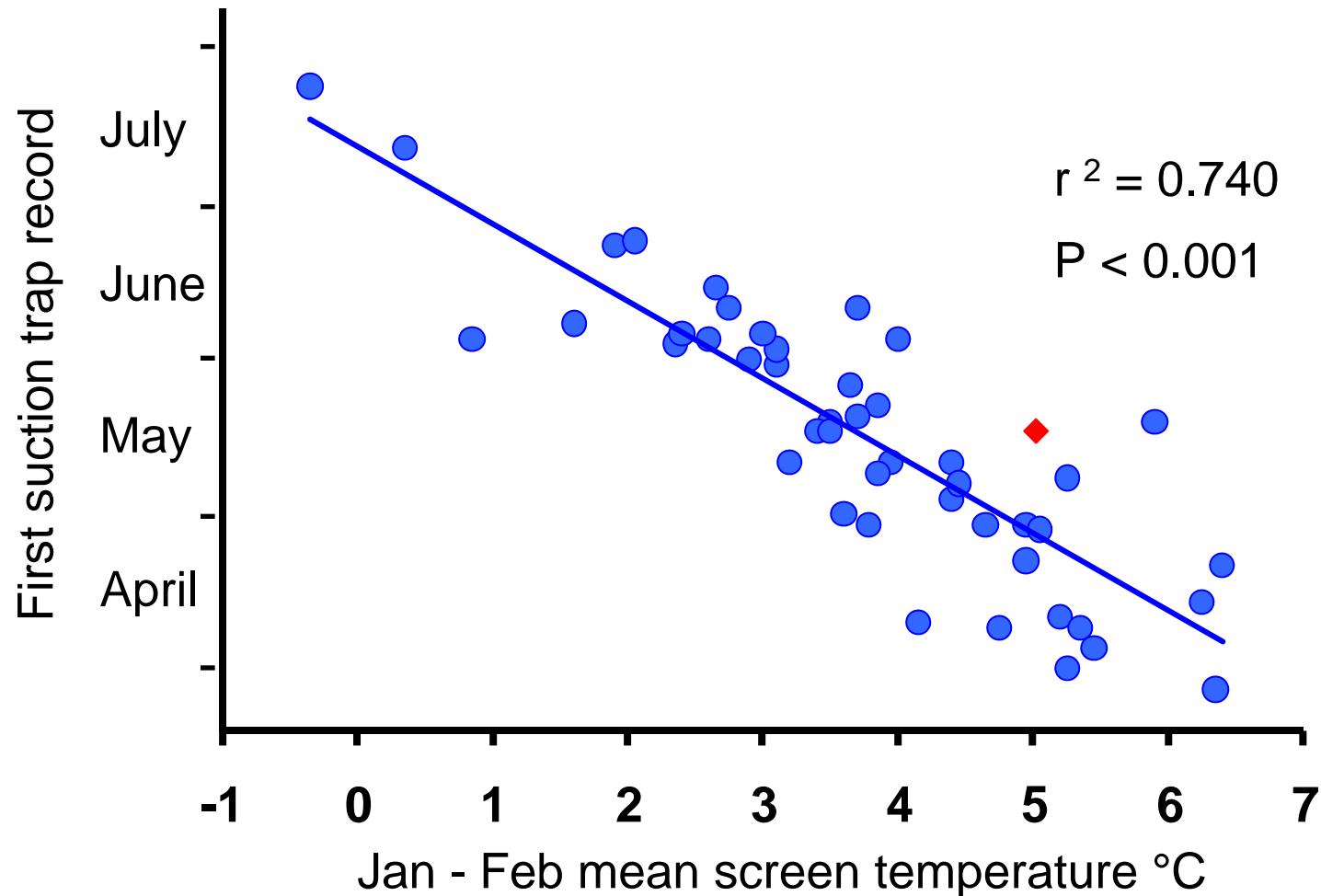
Myzus persicae at Rothamsted 1965 - 2011

(2011 is shown in red)



Myzus persicae at Rothamsted 1965 - 2011

(2011 is shown in red)





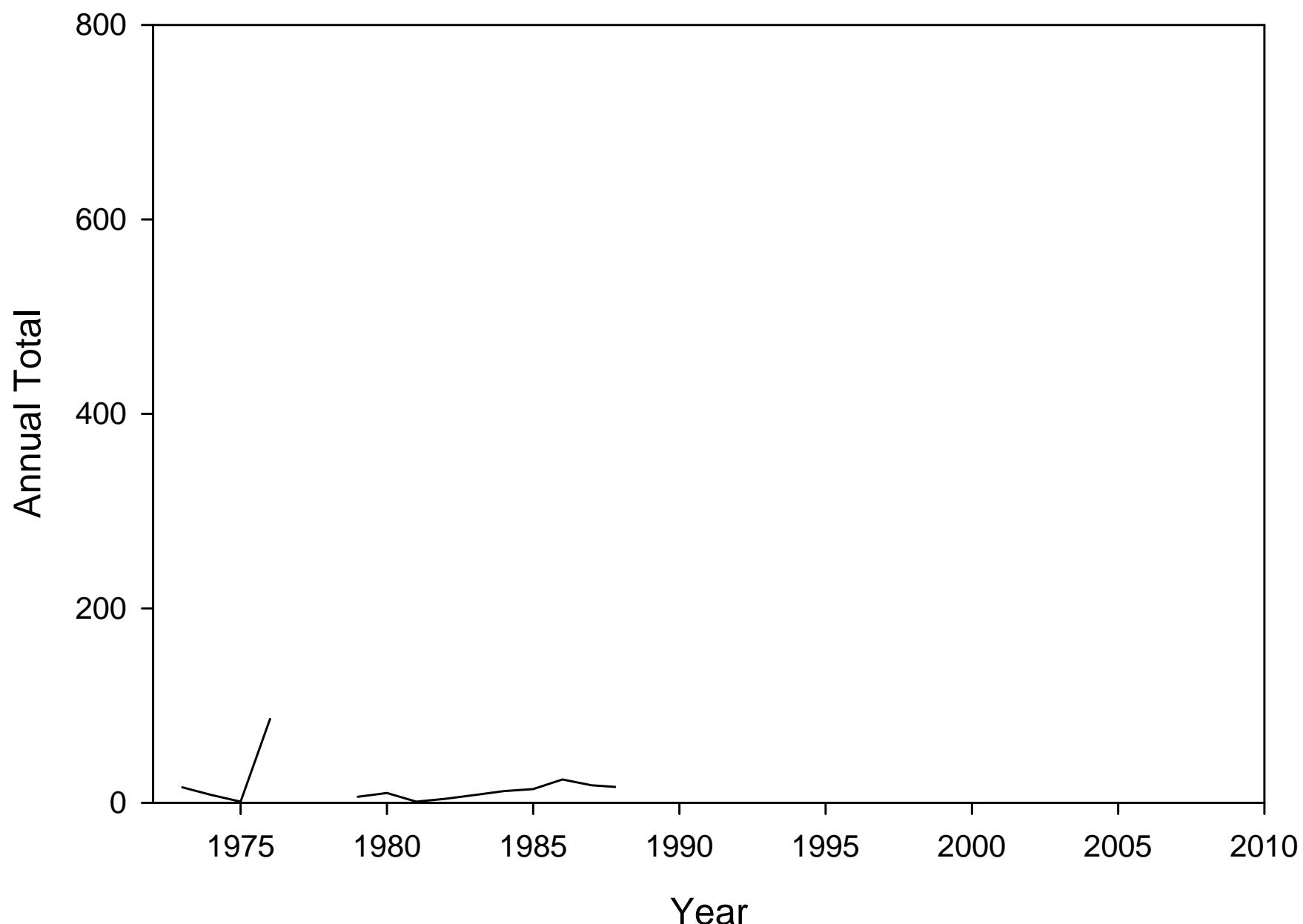


Hoplia philanthus

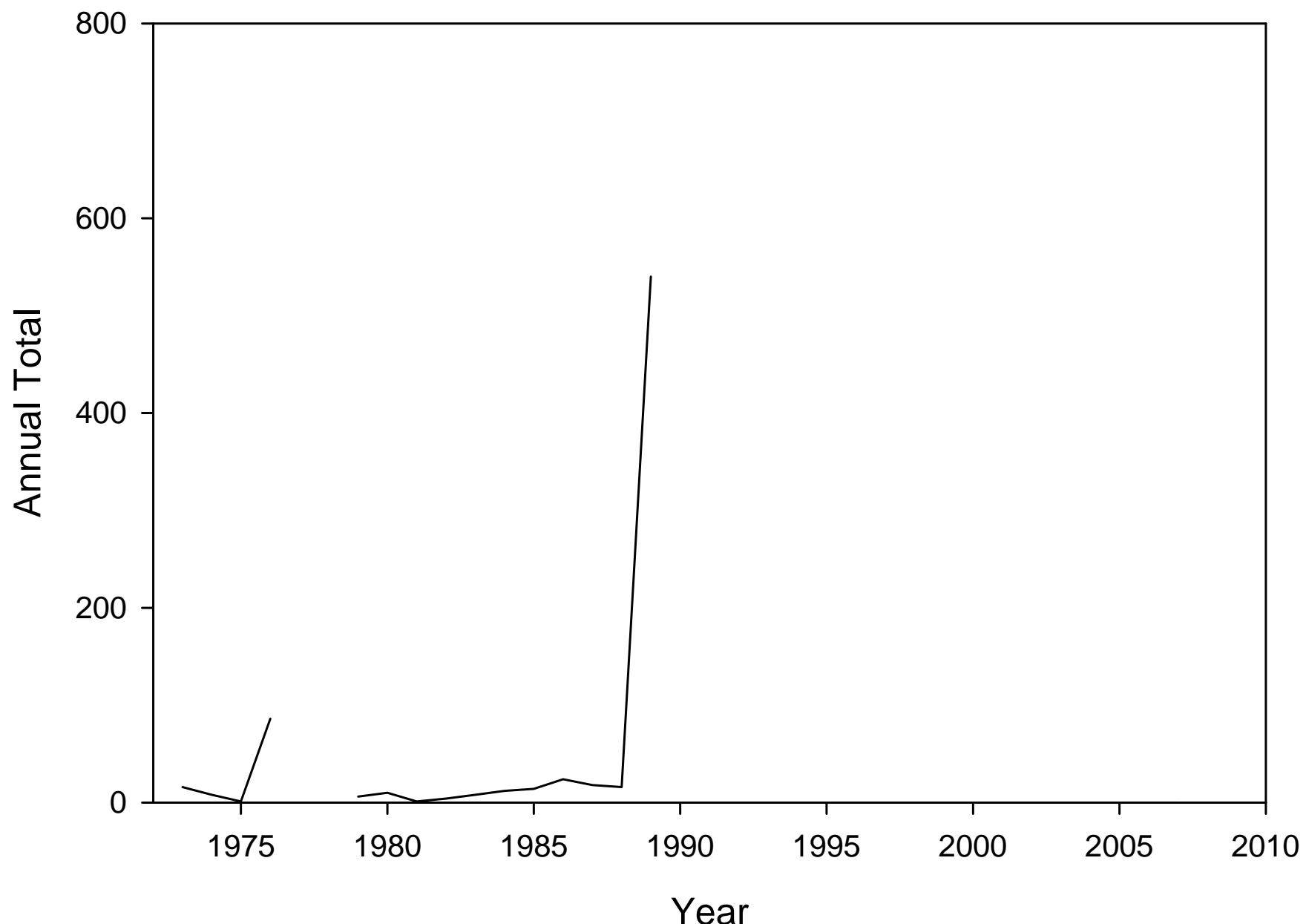
Welsh chafer



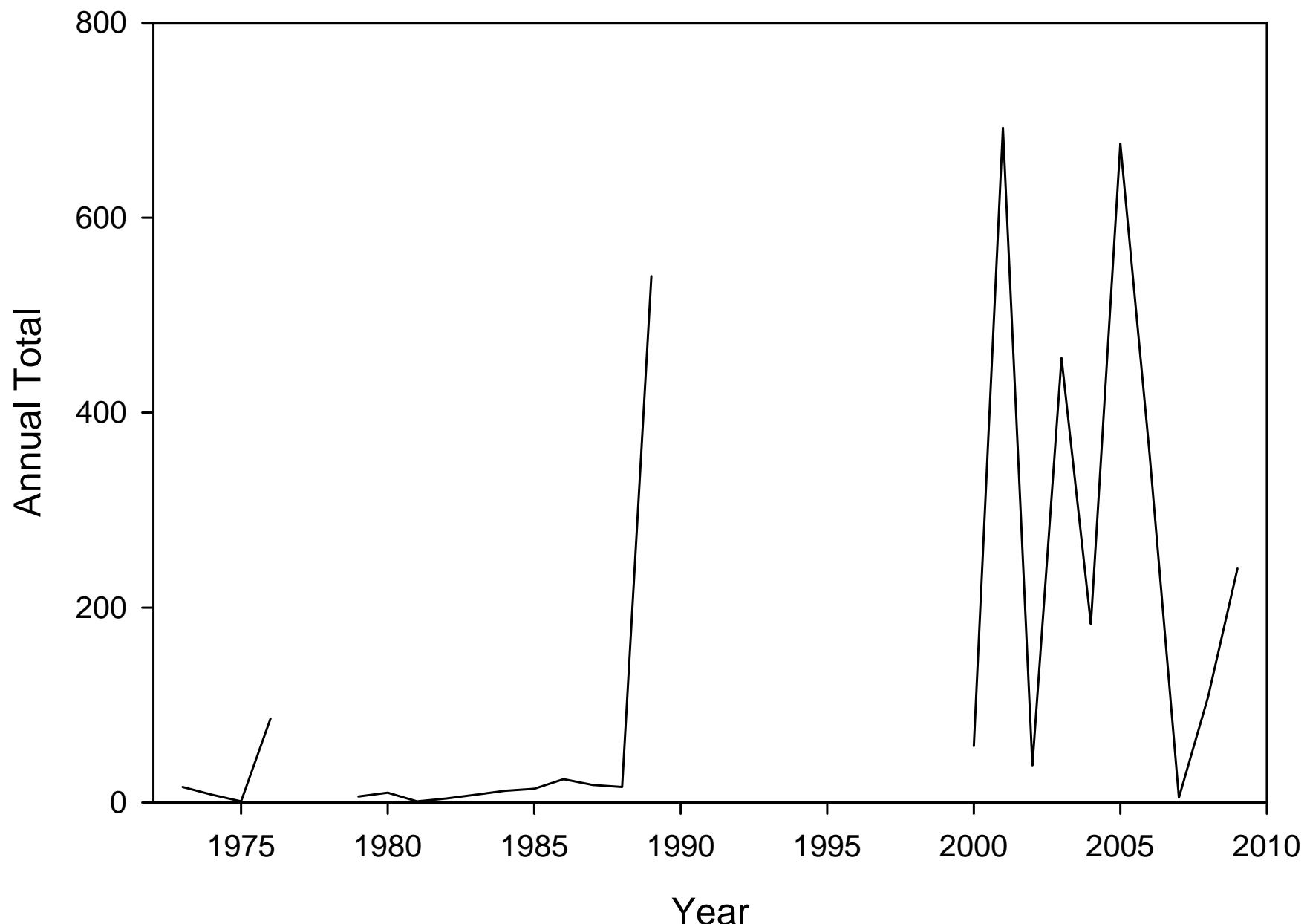
H. philanthus abundance at Silwood Park



H. philanthus abundance at Silwood Park



H. philanthus abundance at Silwood Park





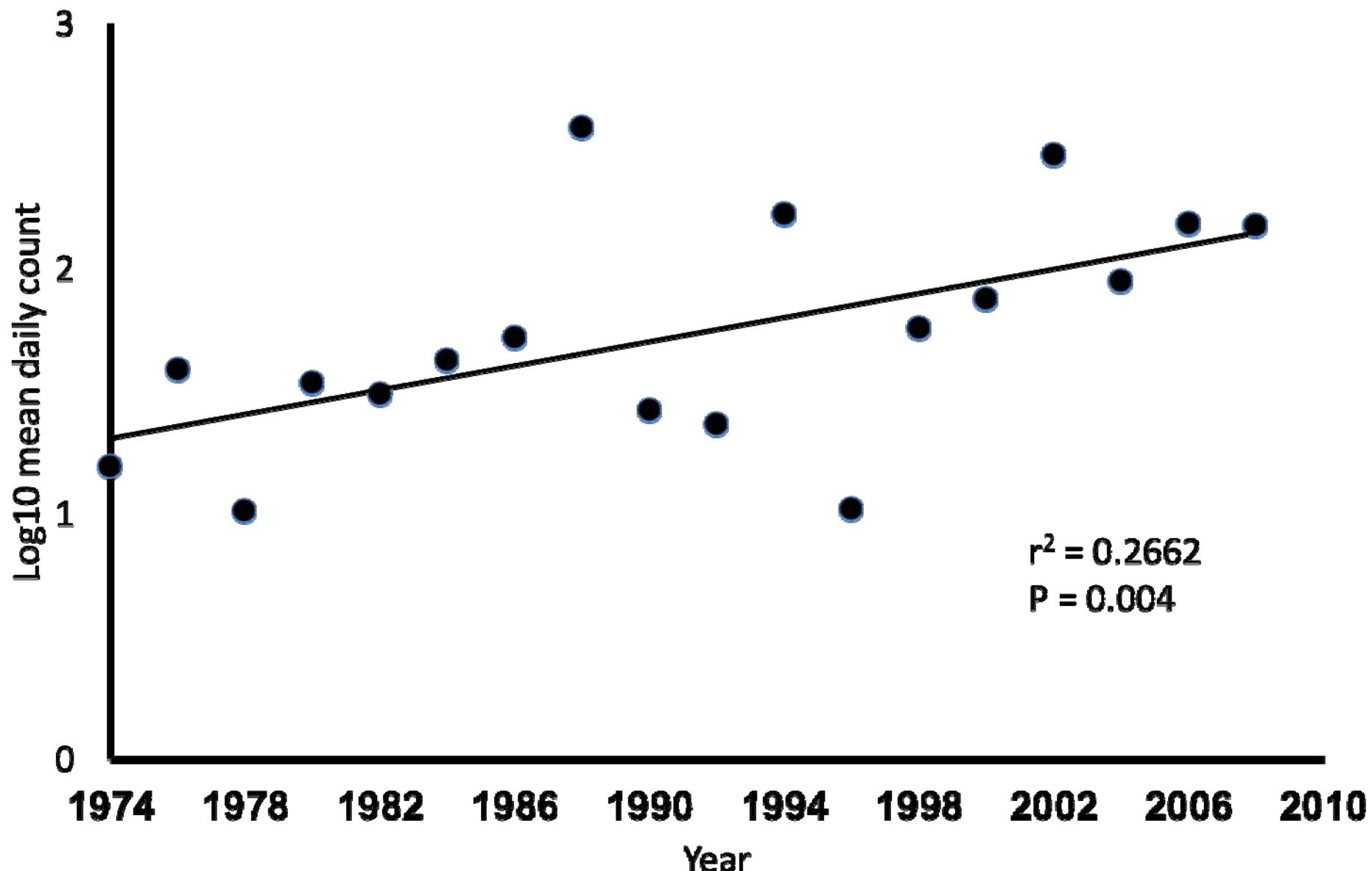
Culicoides

biting midge

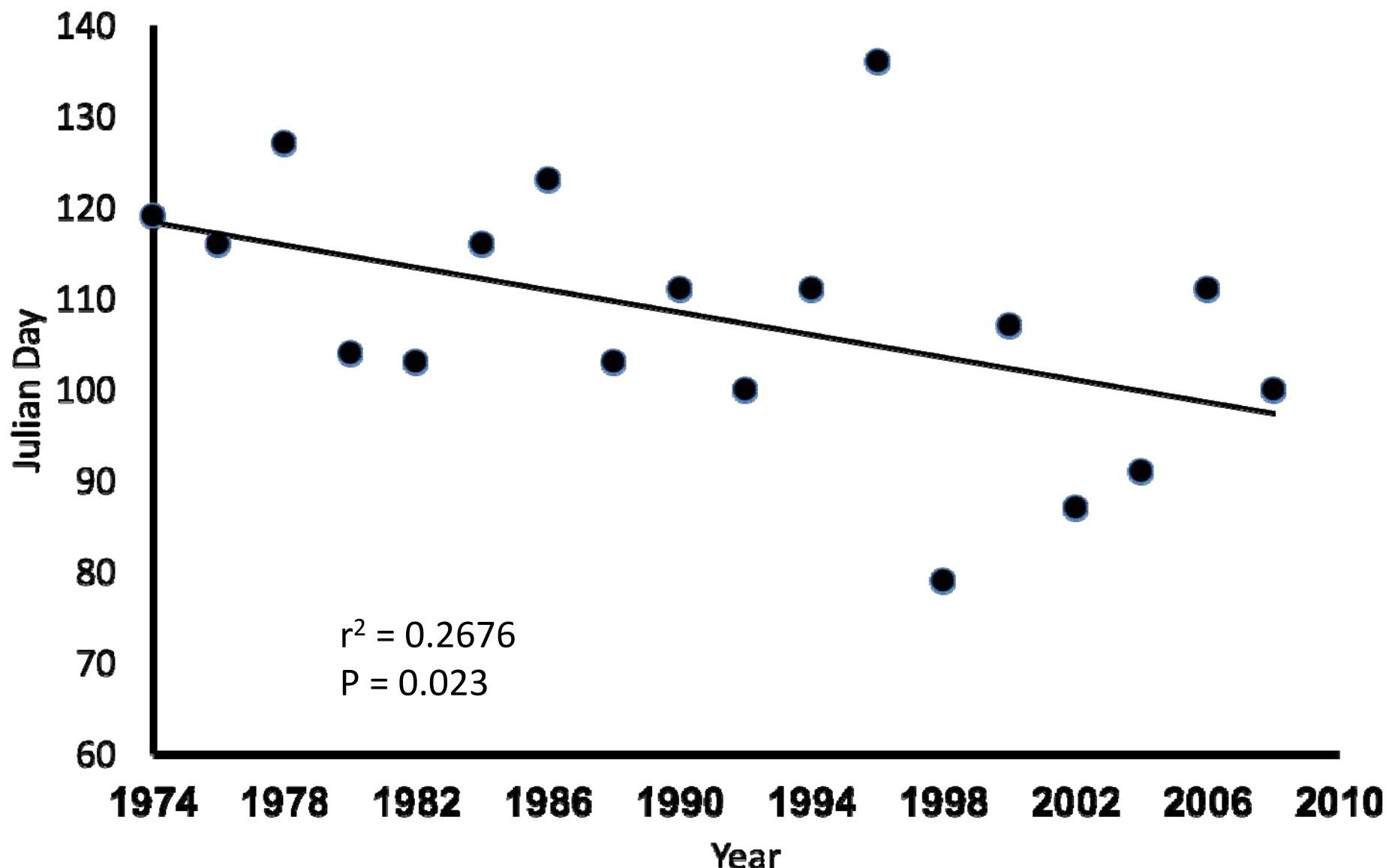
Potential vectors of
bluetongue disease



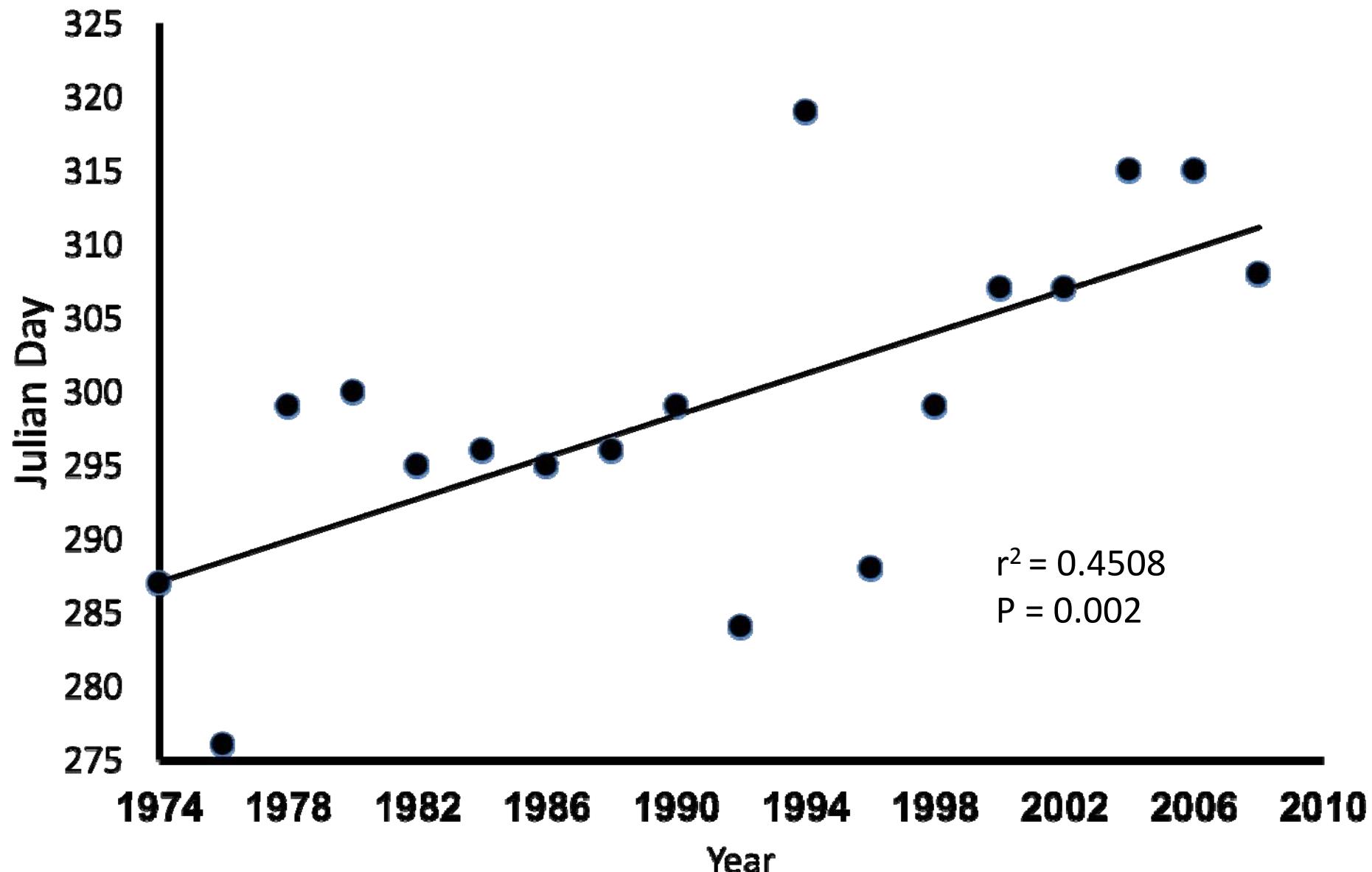
Log10 mean daily count of *Culicoides* spp. at Preston from April - June



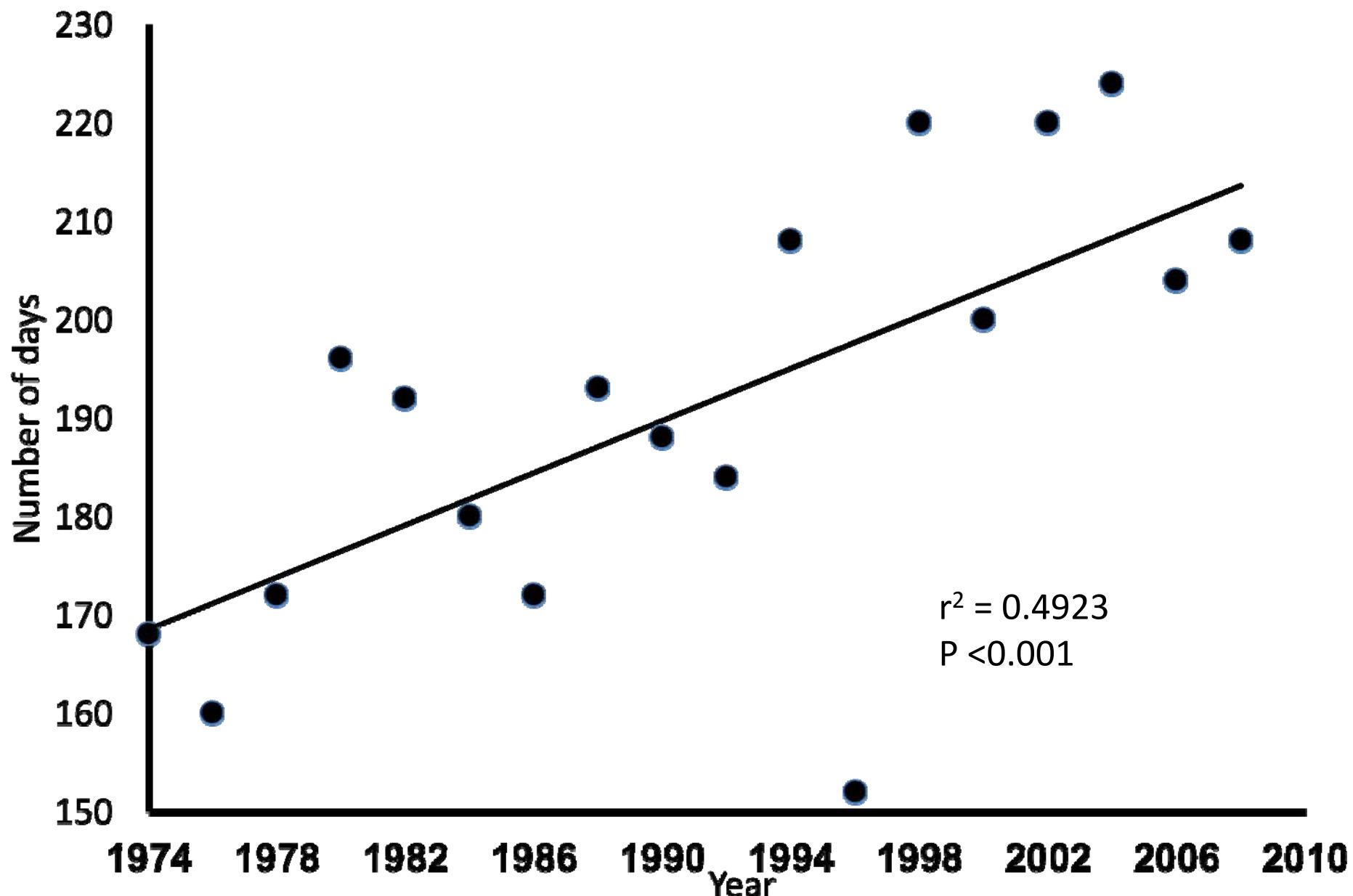
First day that five or more *Culicoides* spp.
were caught in Preston suction trap



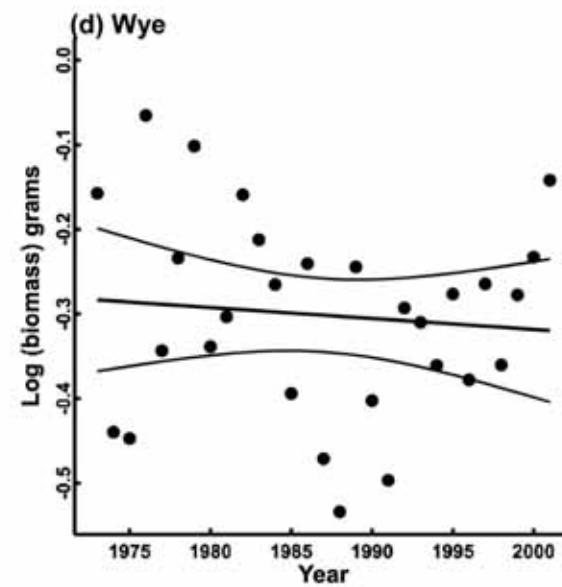
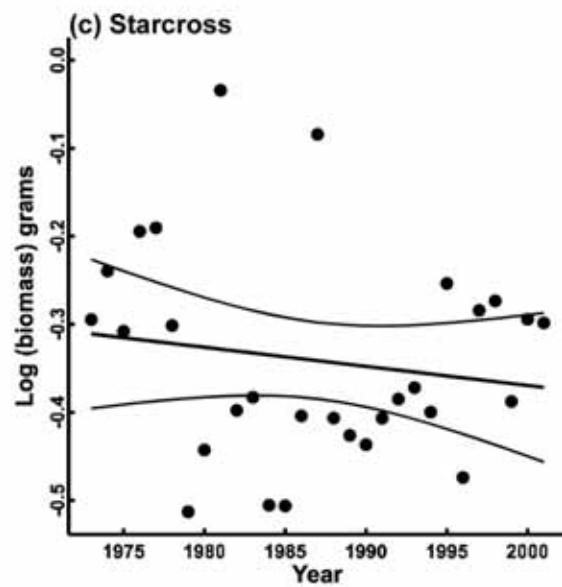
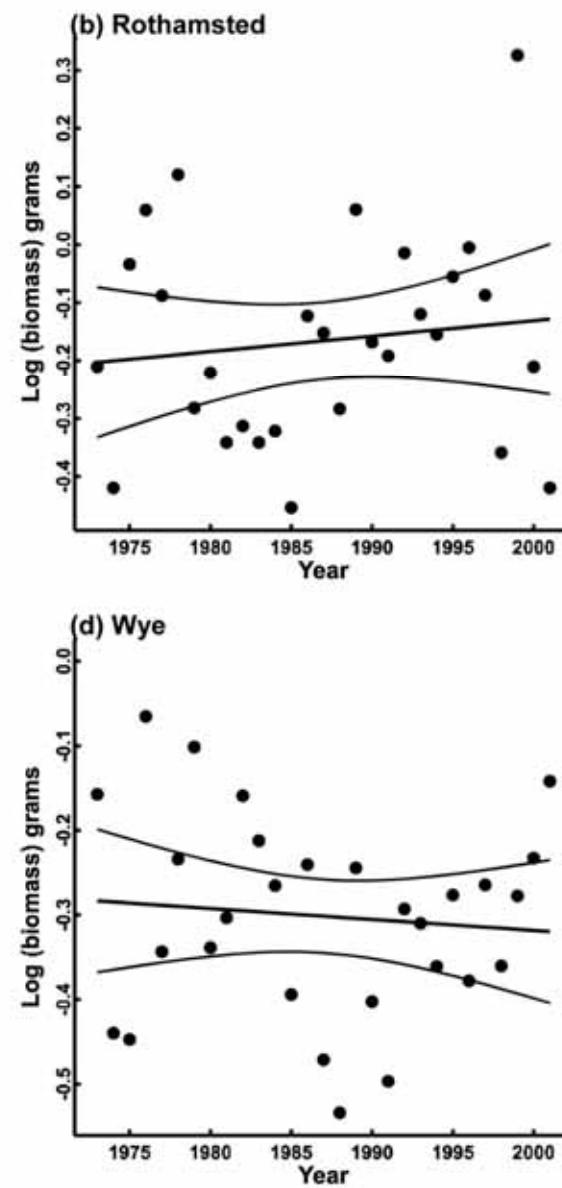
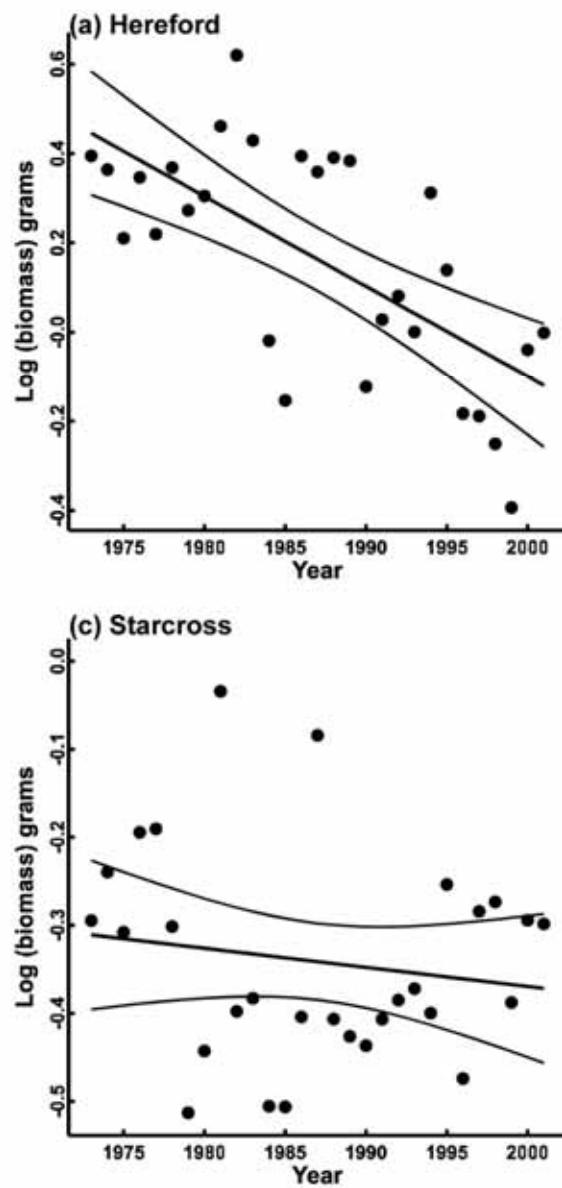
Last day that five or more *Culicoides* spp.
were caught in Preston suction trap



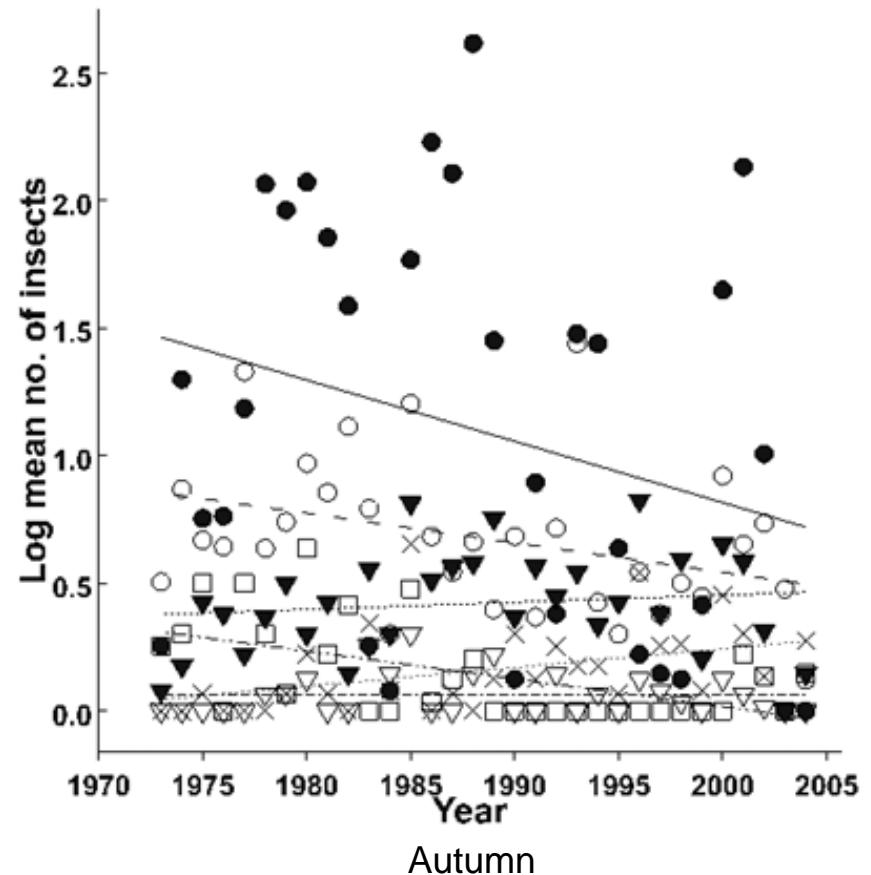
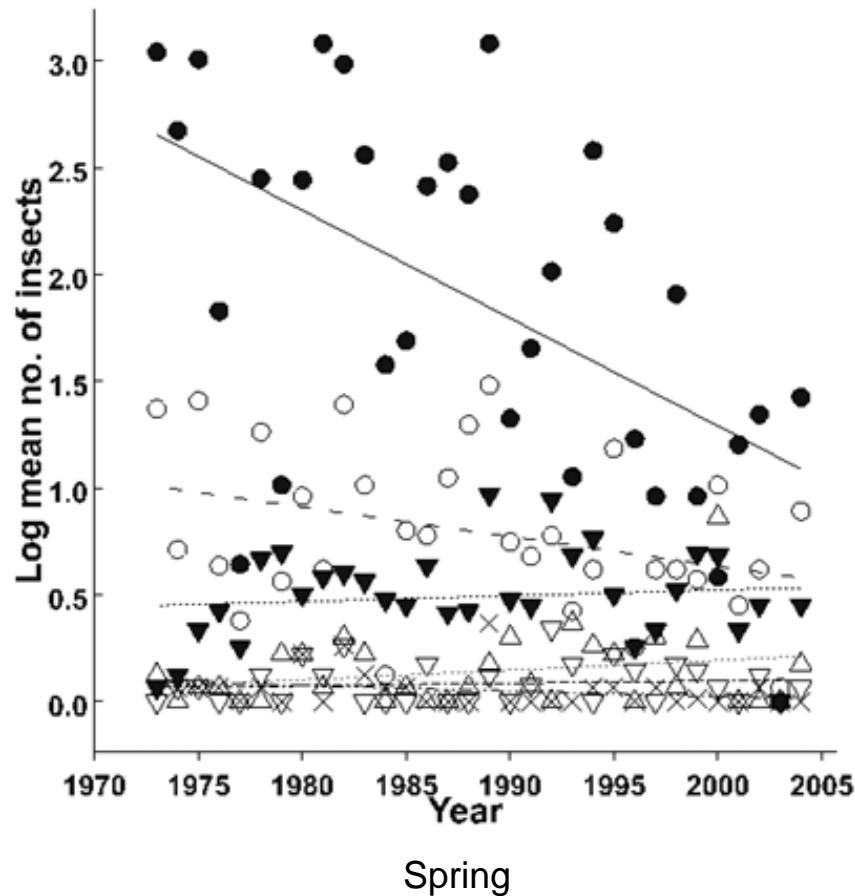
Culicoides spp. season length at Preston



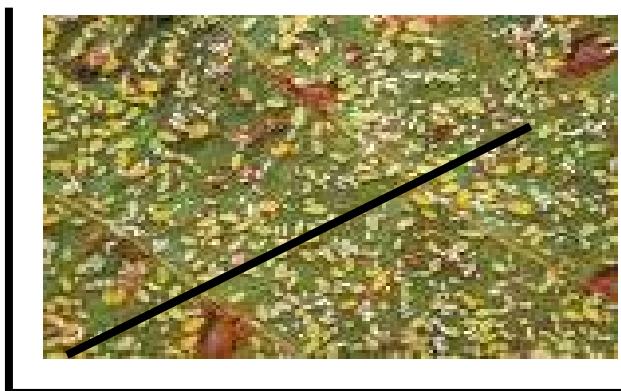
Trends in insect biomass at four sites



Trends in insect abundance at Hereford



Impacts of Climate Change

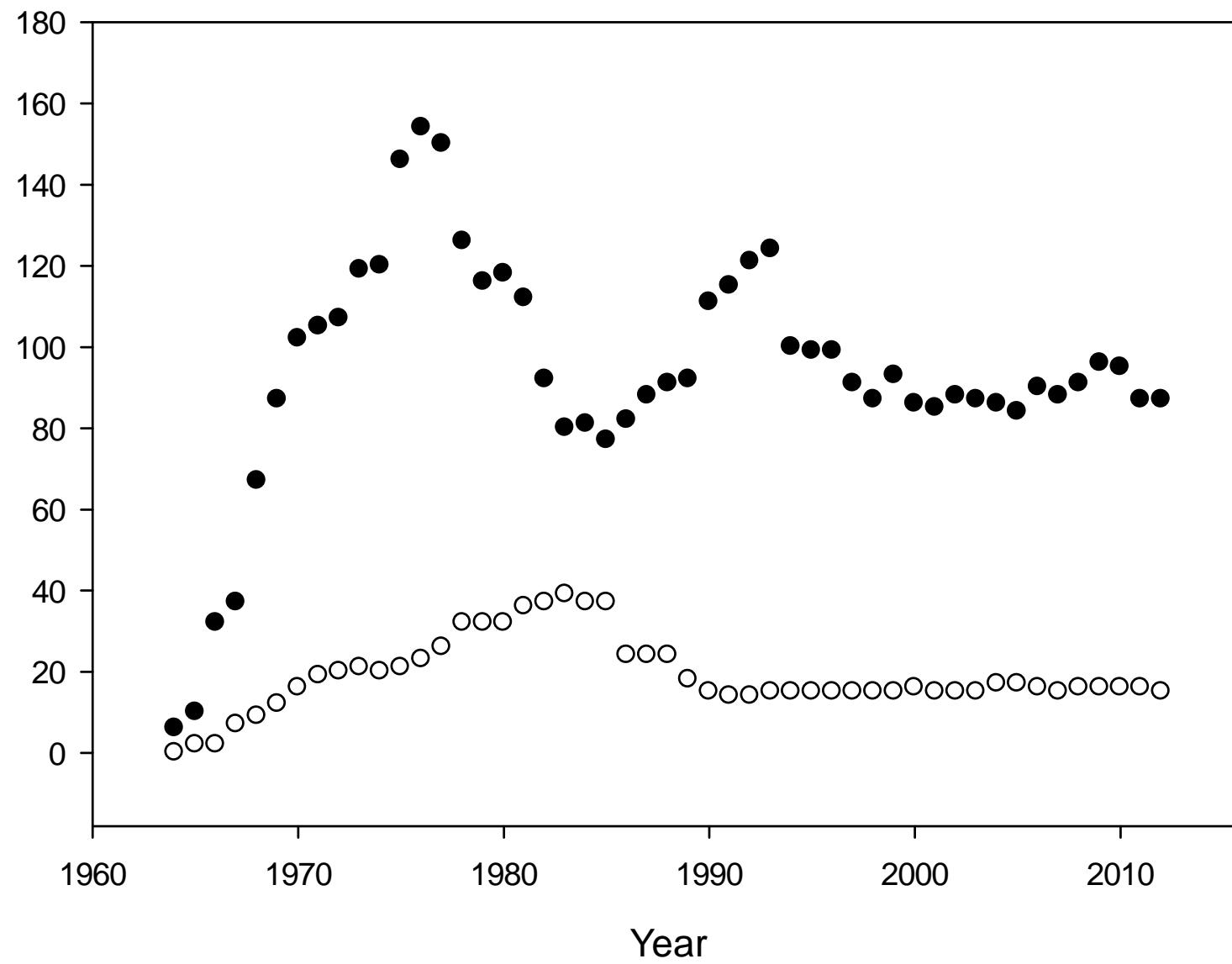


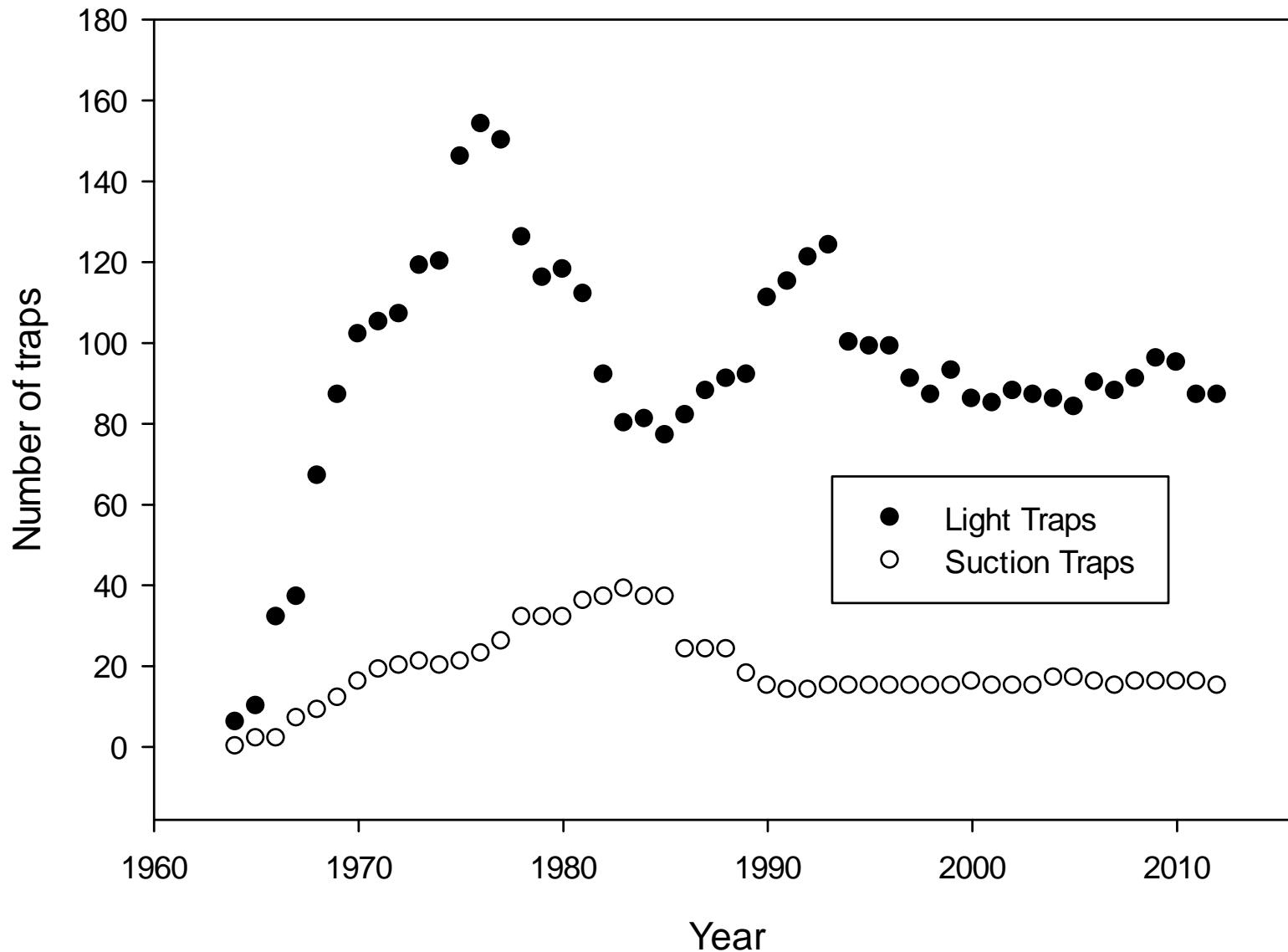
Impacts of Climate Change



Traits:
Fecundity
Mobility







BBSRC NATIONAL CAPABILITY

- ▀ Most comprehensive, standardised sampling scheme for terrestrial invertebrates
- ▀ Suction trap samples stored – funding needed to get other groups out
- ▀ Web access to data available soon – free to academic users
- ▀ At least three posts being lost, some changes are inevitable
- ▀ Automatic identification – e.g. barcoding, image analysis (DAISY?)
- ▀ Every opportunity should be taken to press the case for long-term data and for taxonomists

Acknowledgements

All Rothamsted Insect Survey past and present



All trap operators

Lawes
Agricultural
Trust

