LOCAL AND LANDSCAPE DIVERSITY EFFECTS ON POLLINATORS, PESTS AND NATURAL ENEMIES FOR ORGANIC STRAWBERRIES

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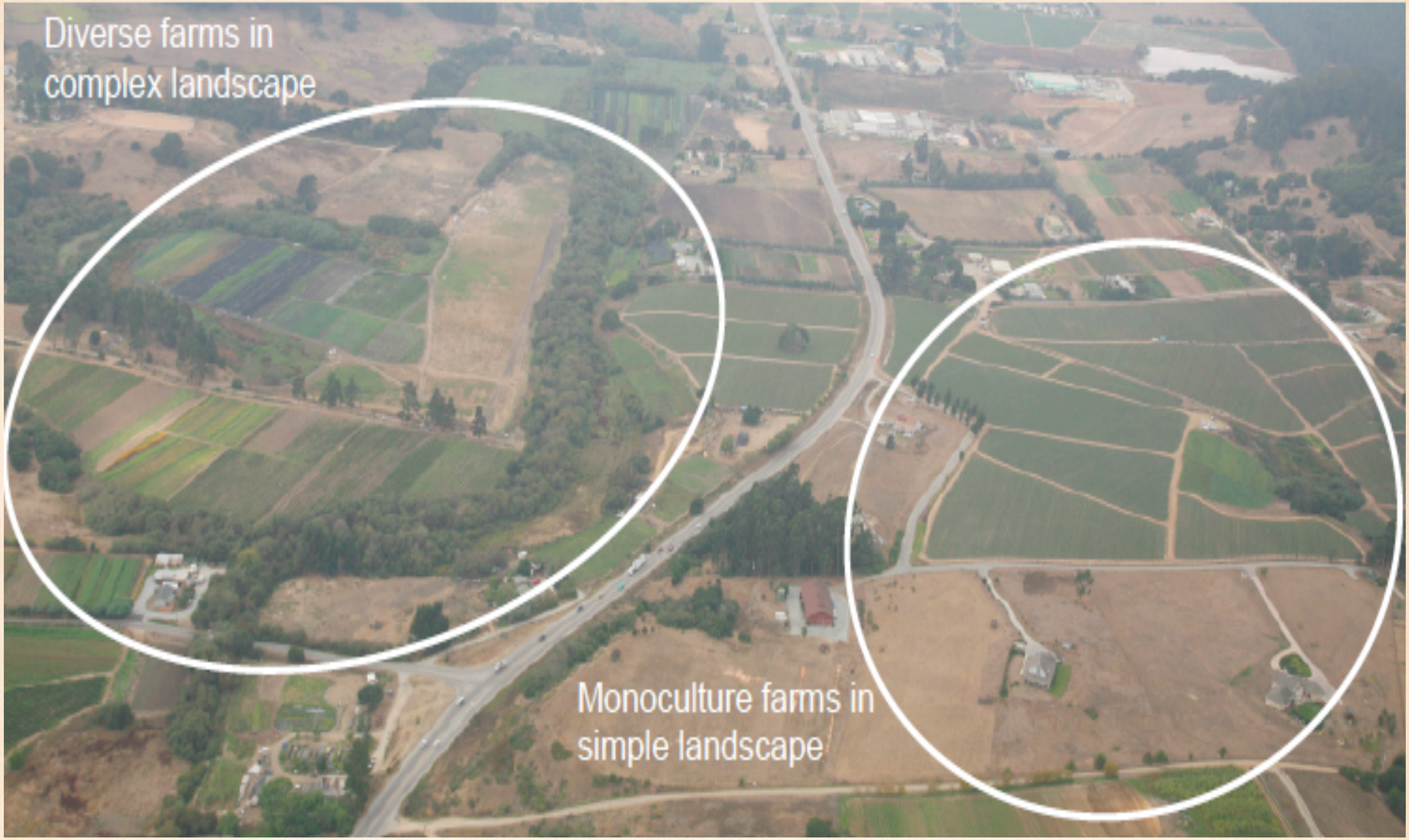
Pollinators are vital for food security

How to shift dependency away from honeybees

One method: Habitat restoration (eg hedgerows)

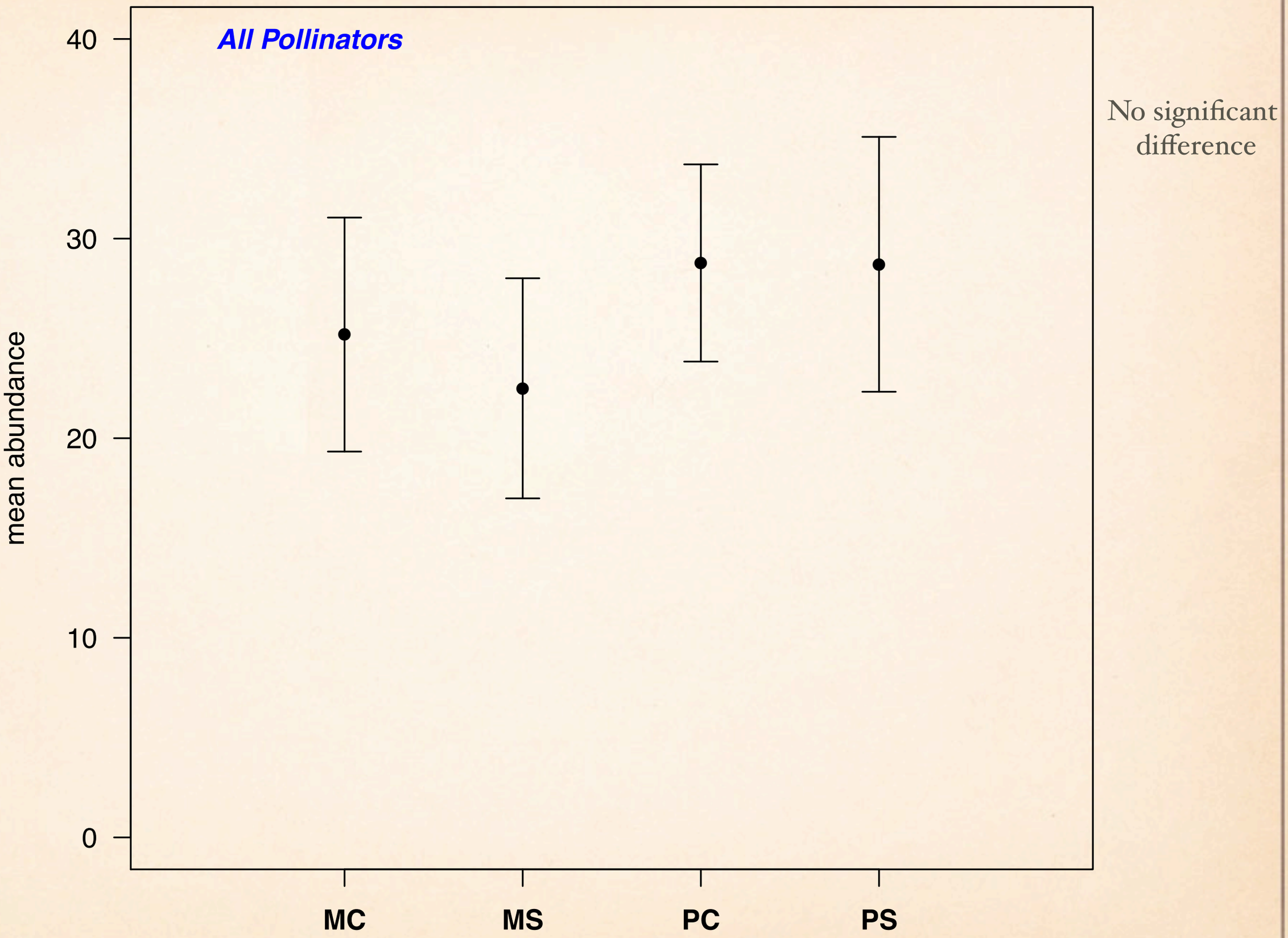
How to shift dependency away from honeybees

Another method: polyculture farming?

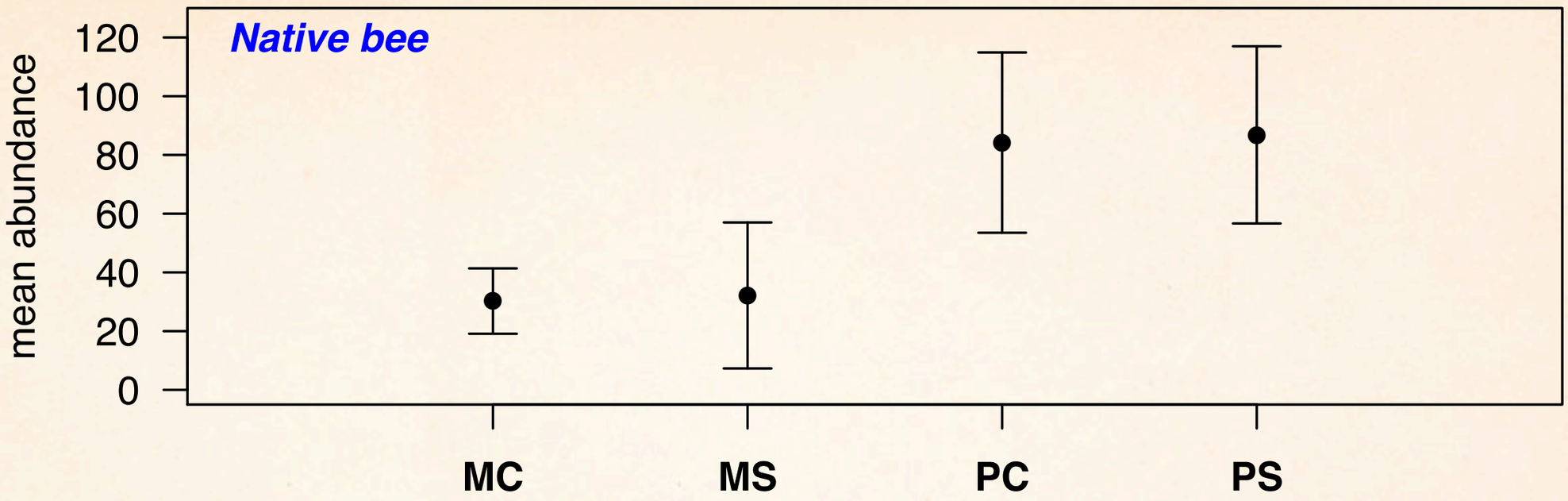


4 site types:
Polyculture/Complex (PC) , Polyculture/Simple (PS)
Monoculture/Complex (MC), Monoculture/Simple (MS)

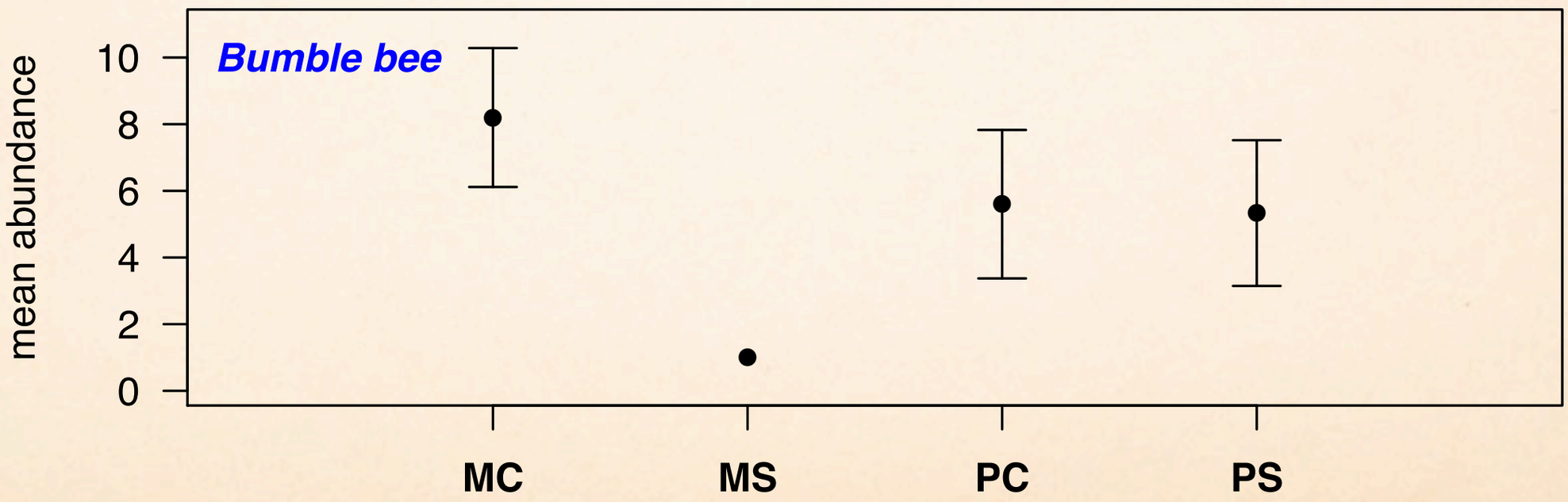
METHODS:
NET AND PAN SAMPLING, IDENTIFICATION


All Pollinators
40
30
20
10
0
mean abundance
MC
MS
PC
PS
No significant difference


Without honey bees
40
30
20
10
0
mean abundance
MC
MS
PC
PS
Trend of more alternative pollinators in poly sites

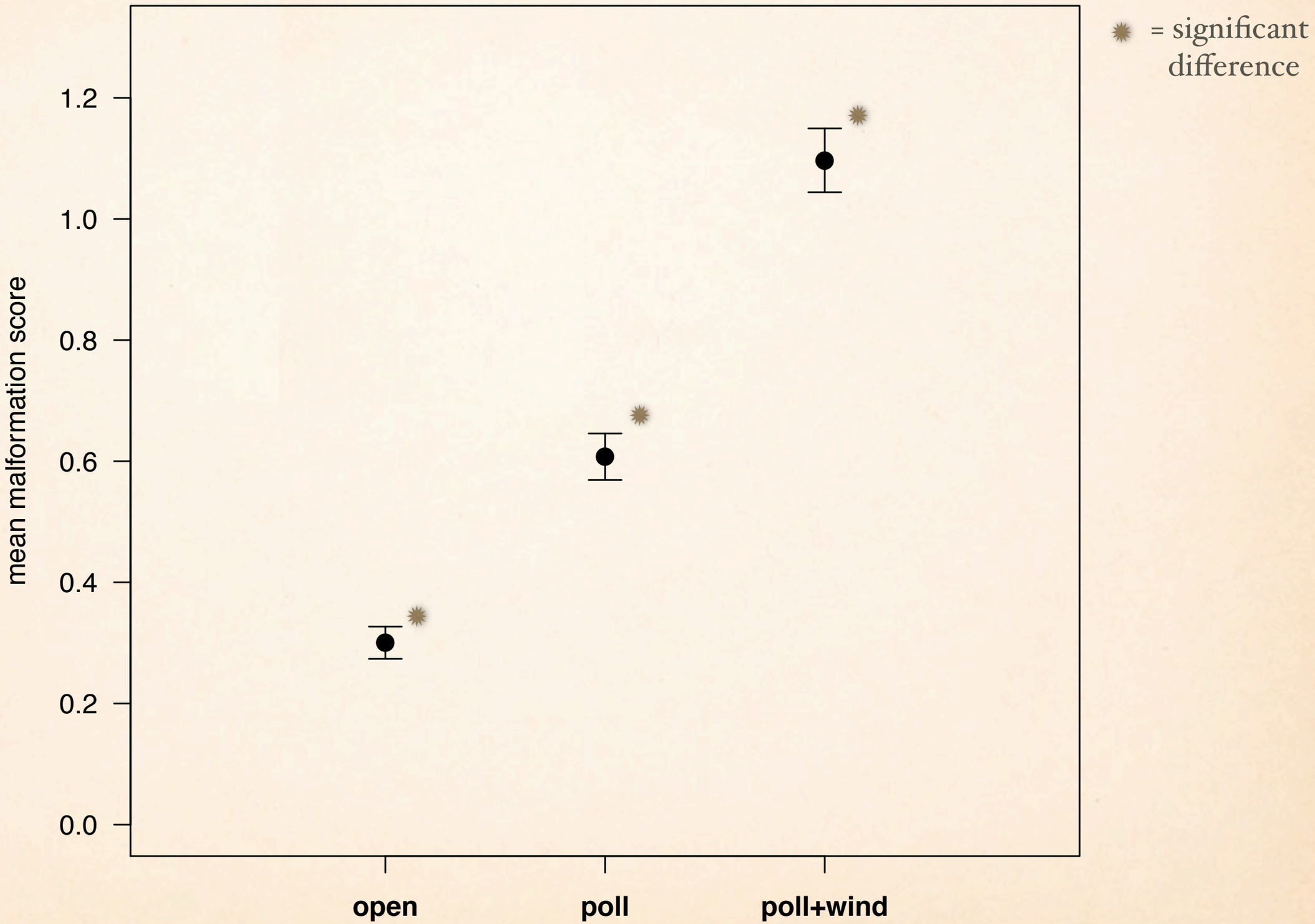


Trend of more native bees in poly sites

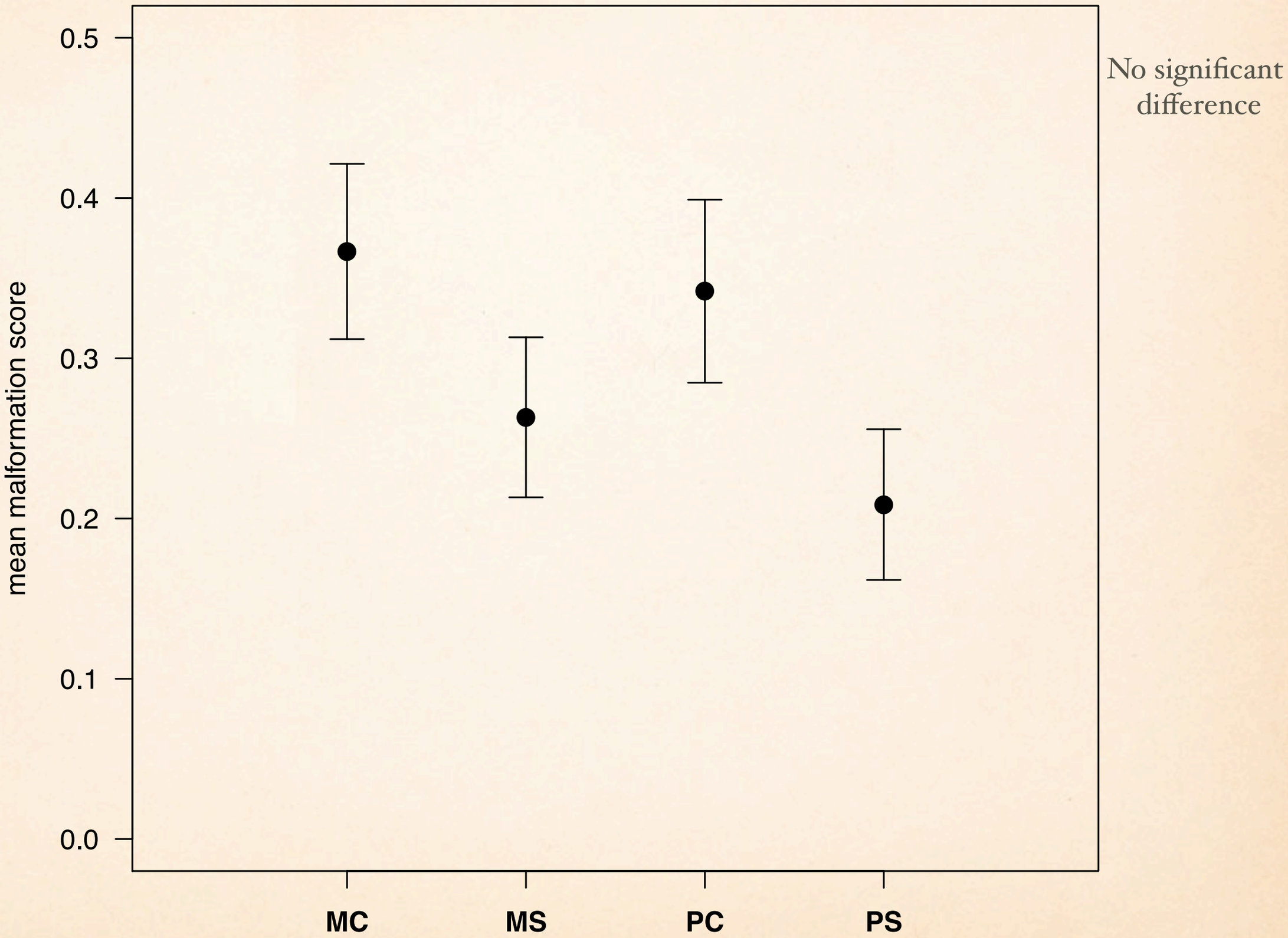


METHODS:
POLLINATOR EXCLUSION

Strawberry malformation with pollinator exclusion



Strawberry malformation across site types



SOME CONCLUDING THOUGHTS ON POLLINATORS

- Overall pollinator abundance:
  Crop and landscape diversity = no effect

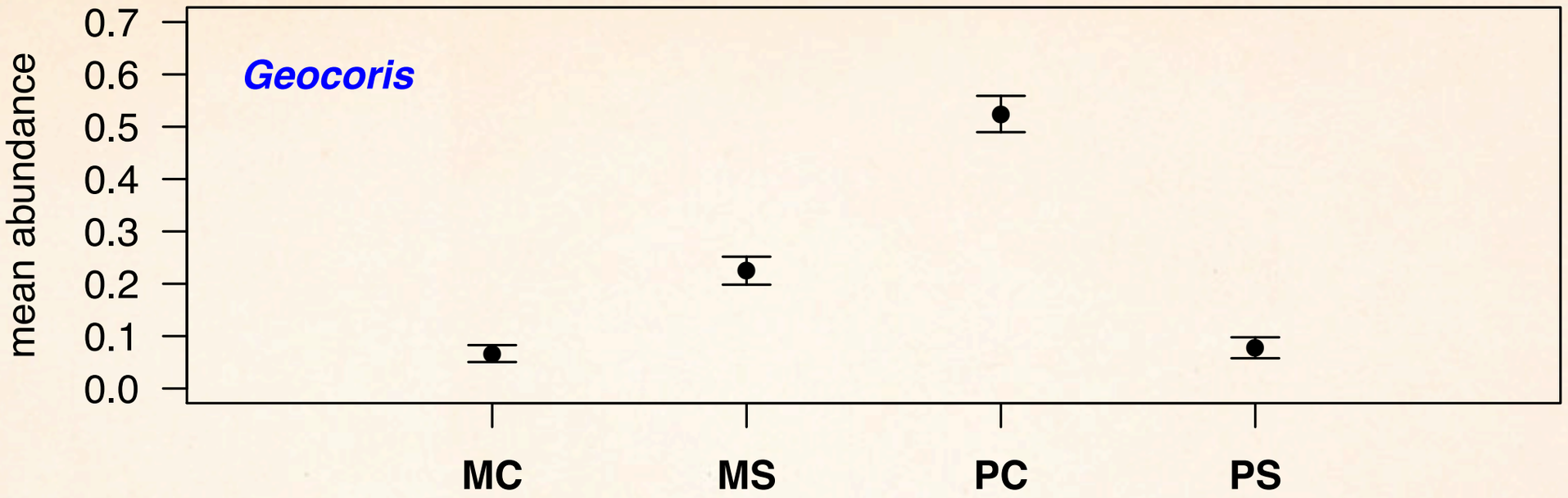
- Honey bees very abundant at monoculture sites

- Native bees are less abundant at monoculture sites

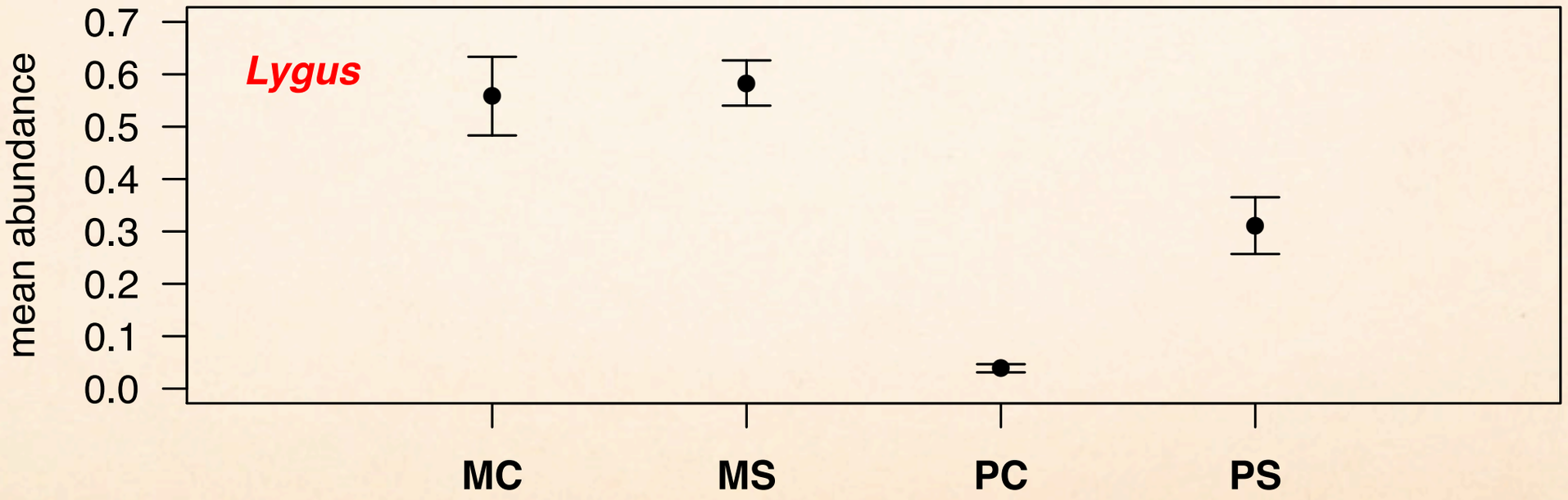
- Monoculture sites would be at risk of honeybee loss
  Especially important for pollinator dependent crops
  (eg raspberries, almonds)

LET'S TALK ABOUT LYGUS AND NATURAL PEST CONTROL!


C.
D.

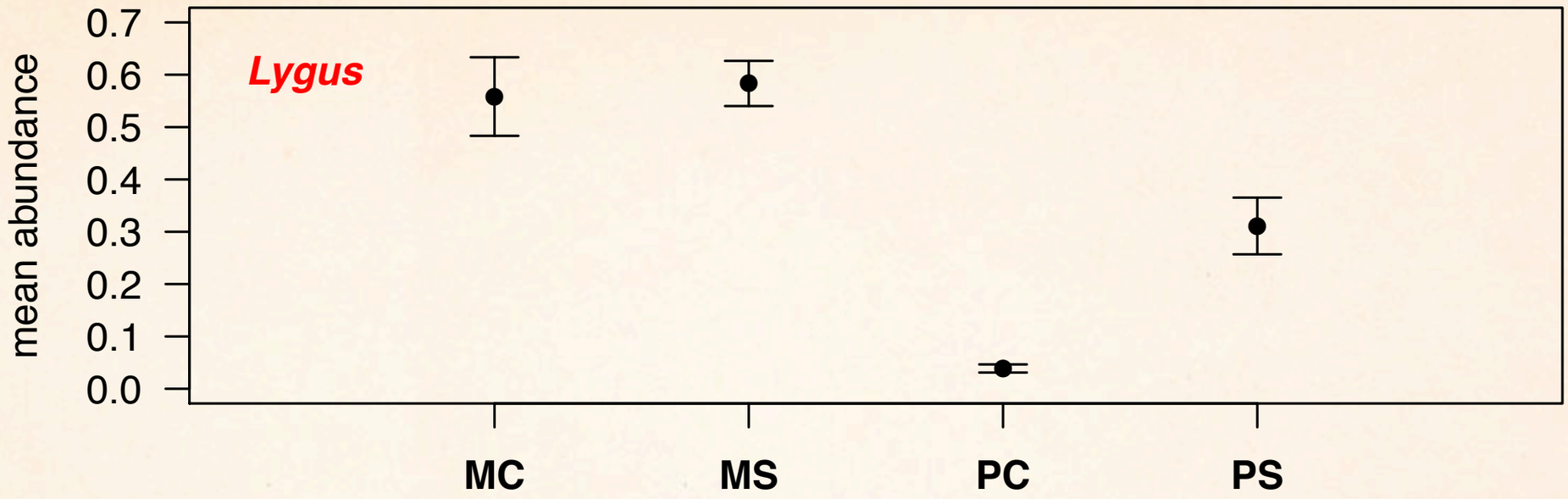


Poly = significantly more



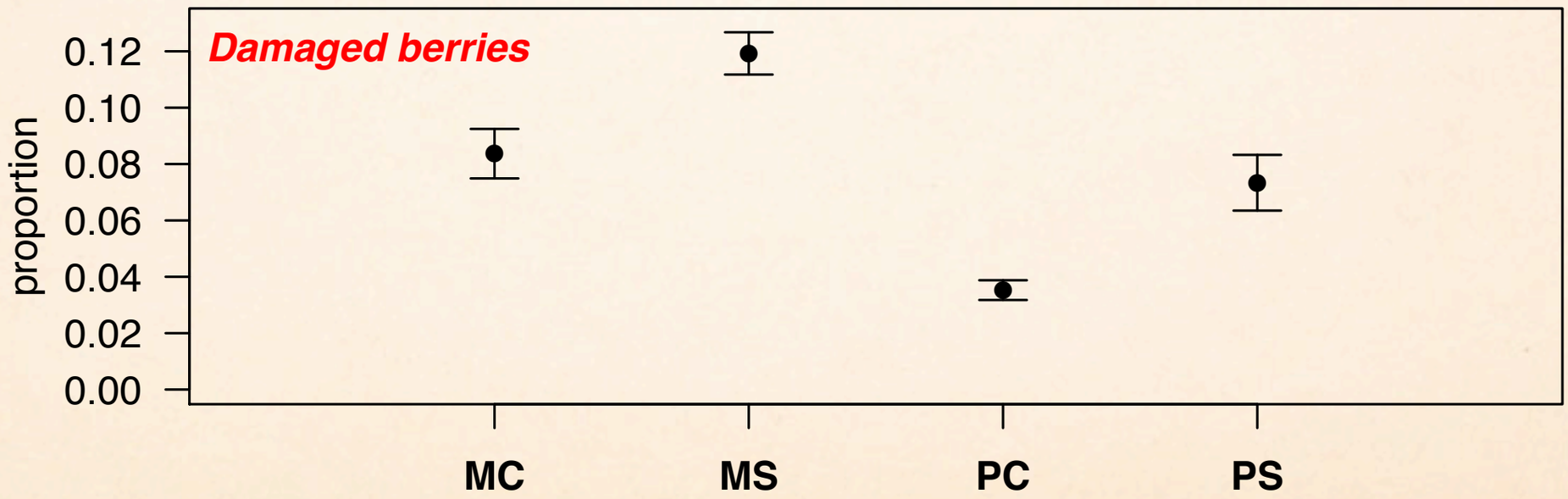
Poly = significantly less

Simple= significantly more



Poly = significantly less

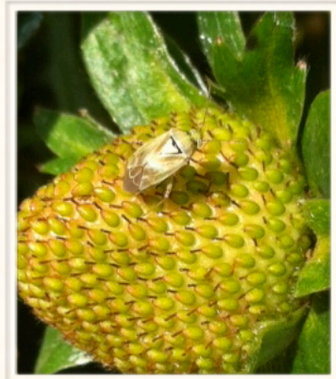
Simple= significantly more

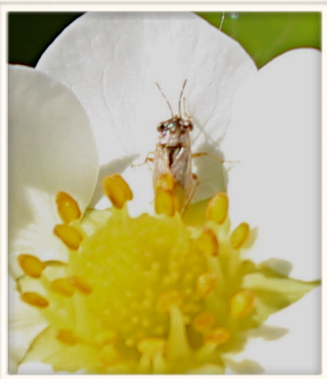


No crop or landscape effect

Strong lygus effect

Final thoughts





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Many thanks!!!!