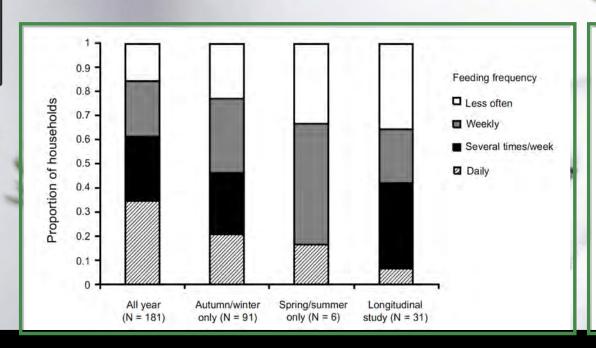
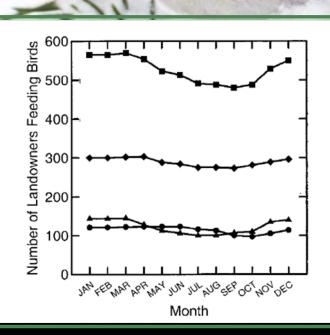


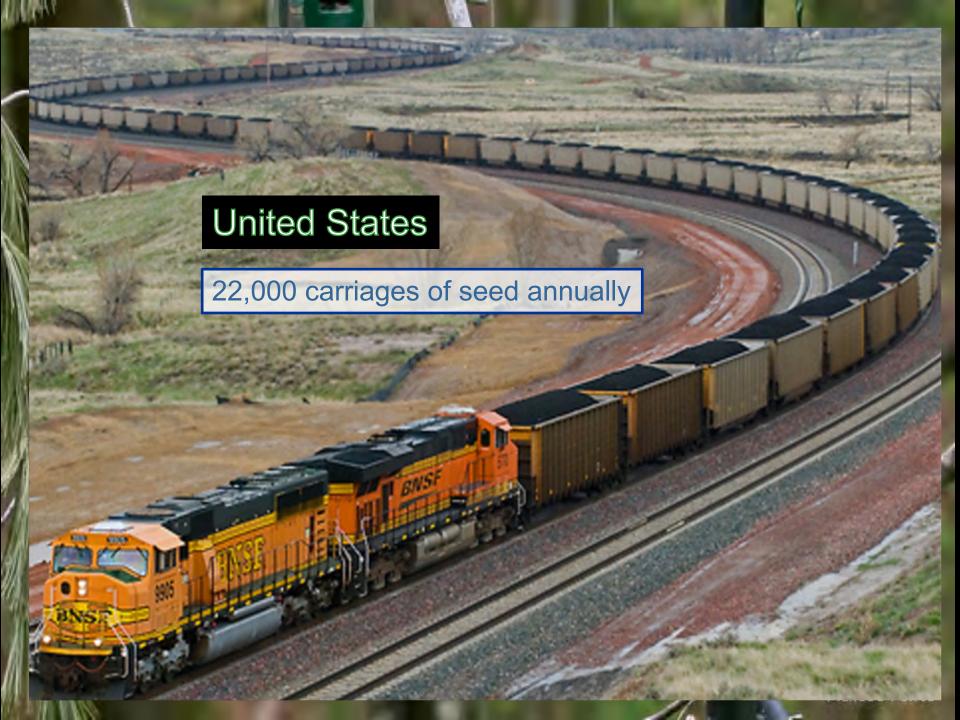


Now, often year round

Less strict in warmer places







What happens when we feed birds?

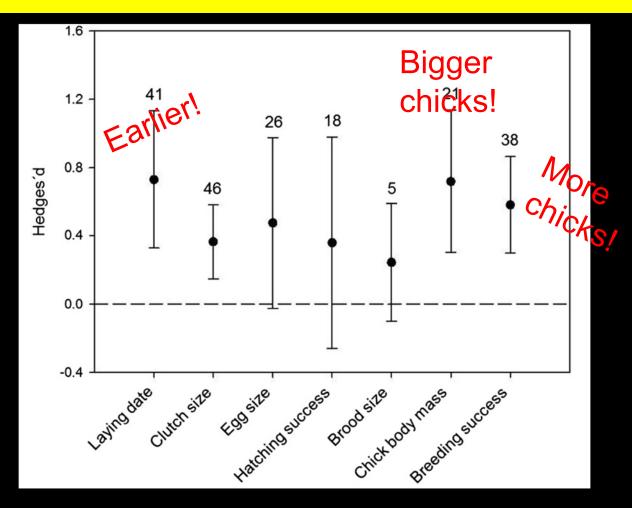




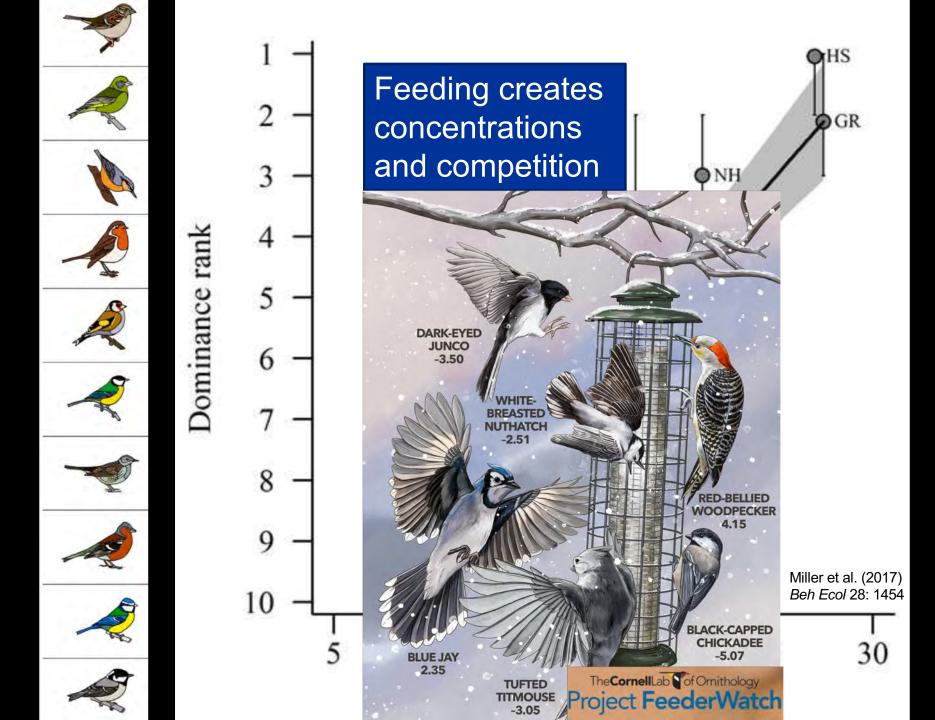
Supplementary feeding experiments

Survive winter better, start breeding earlier, have more attempts, produce more offspring

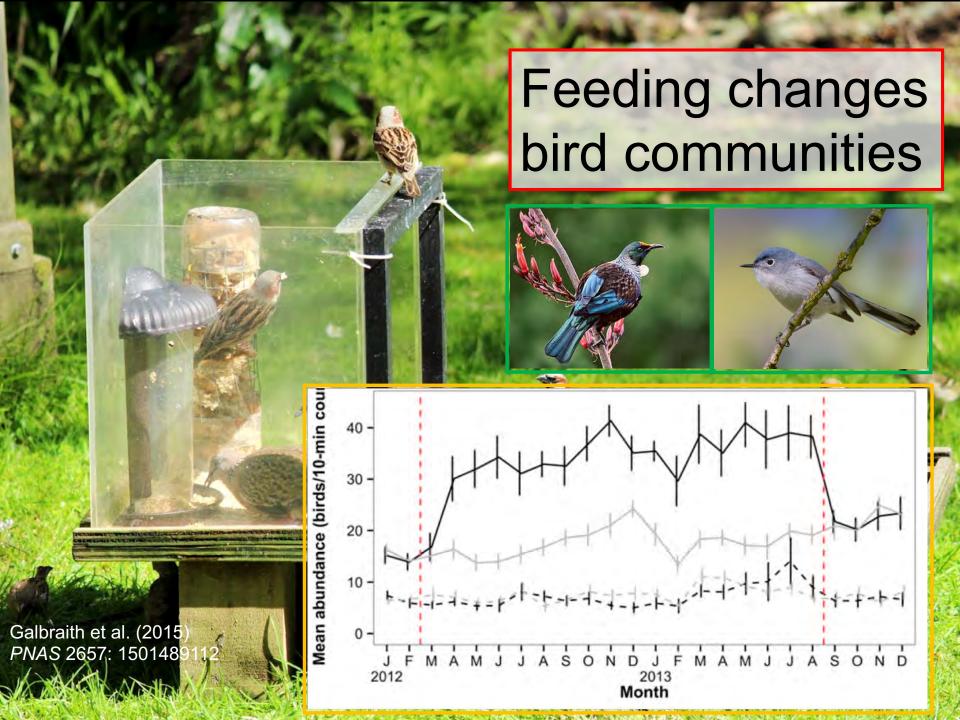
Additional food always changes something!



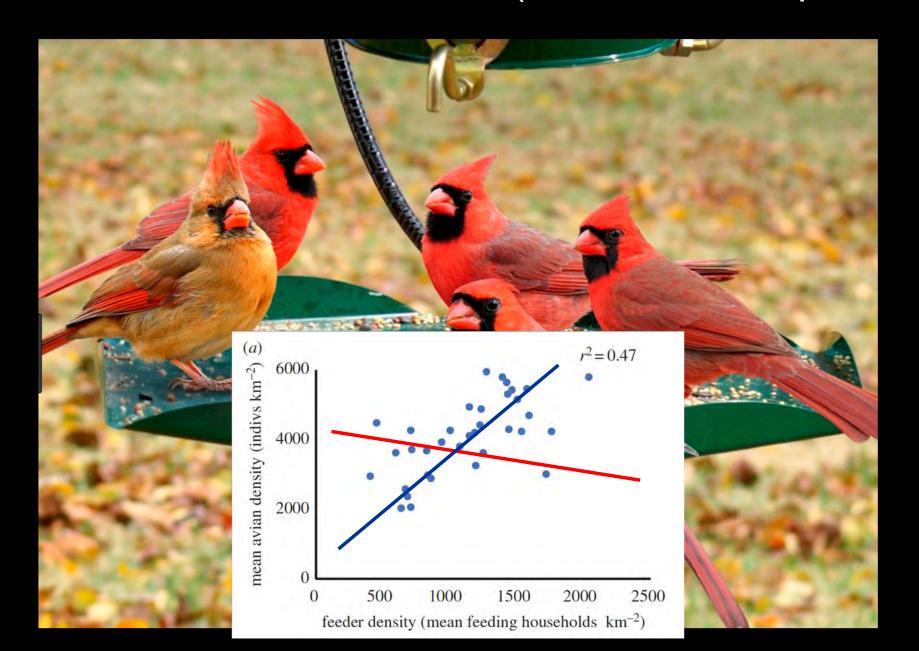
Ruffino et al. (2014) Frontiers Zoology 11: 80







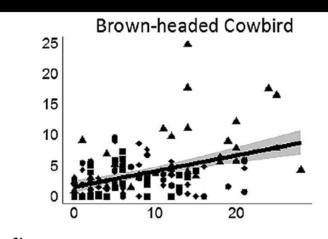
More feeders, more birds (but not more species)

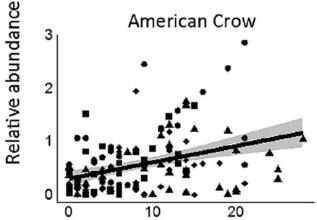


More feeders, more nasties









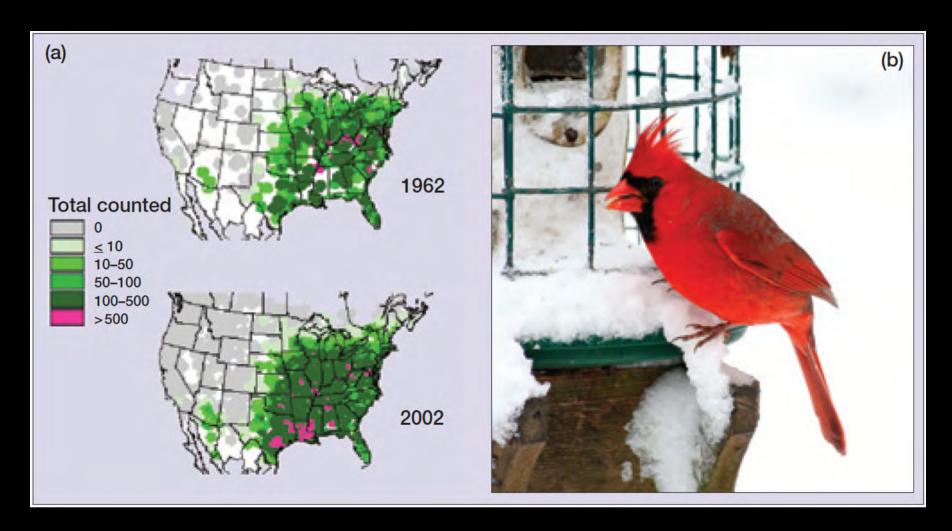
No effect





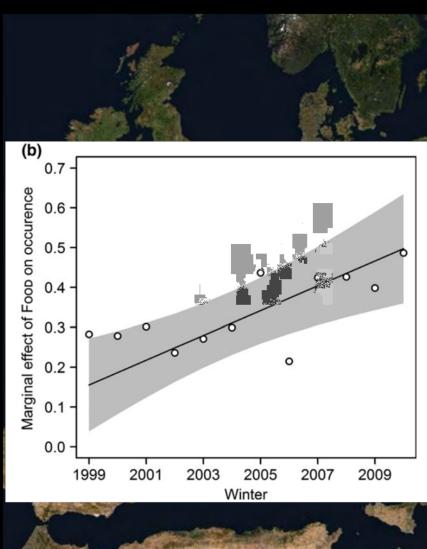
Low nest success with most feeders and crow

Is feeding moving birds around?

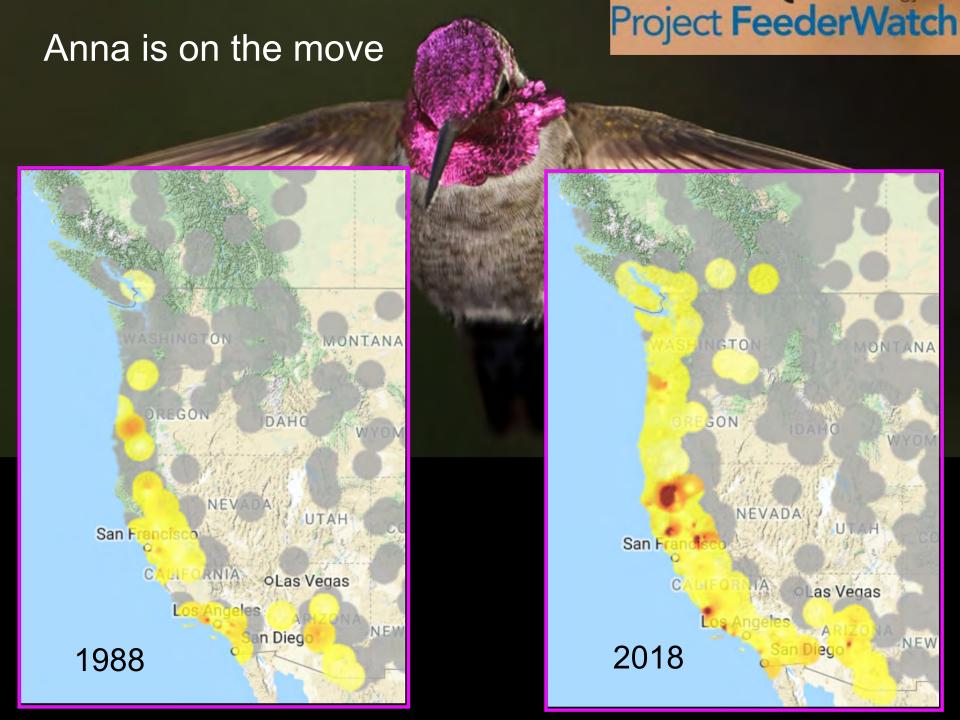


Blackcaps: a fortuitous mistake?

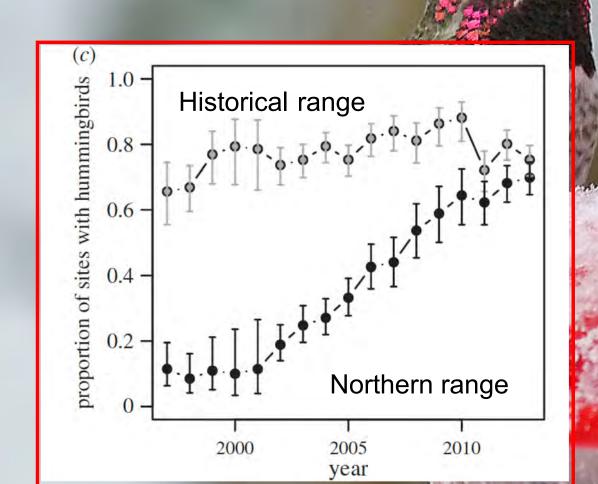




Plummer et al. (2015) Global Change Biology 21: 4353-63



Anna's Hummingbird In Vancouver



Grieg et al. (2017)

ProcRoySocB 284: 20170256



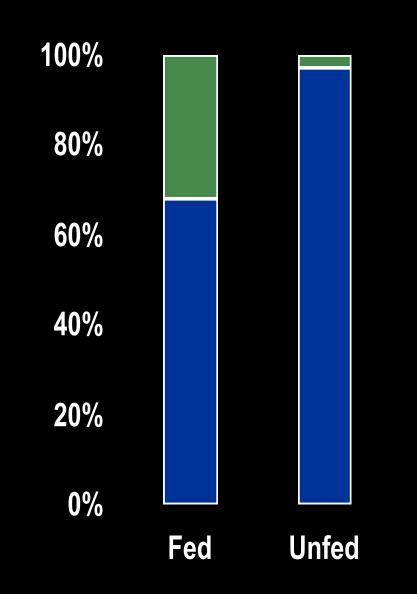
Margaret Brittingham
Winter in Wisconin
25 years of feeding

No difference in survival!

No evidence of dependency

Brittingham & Temple (1992) J Field Ornith 63: 190-194

What about chicks?



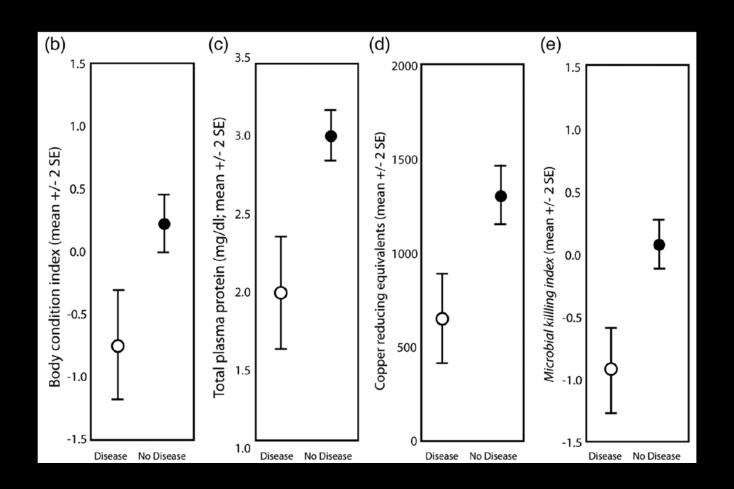


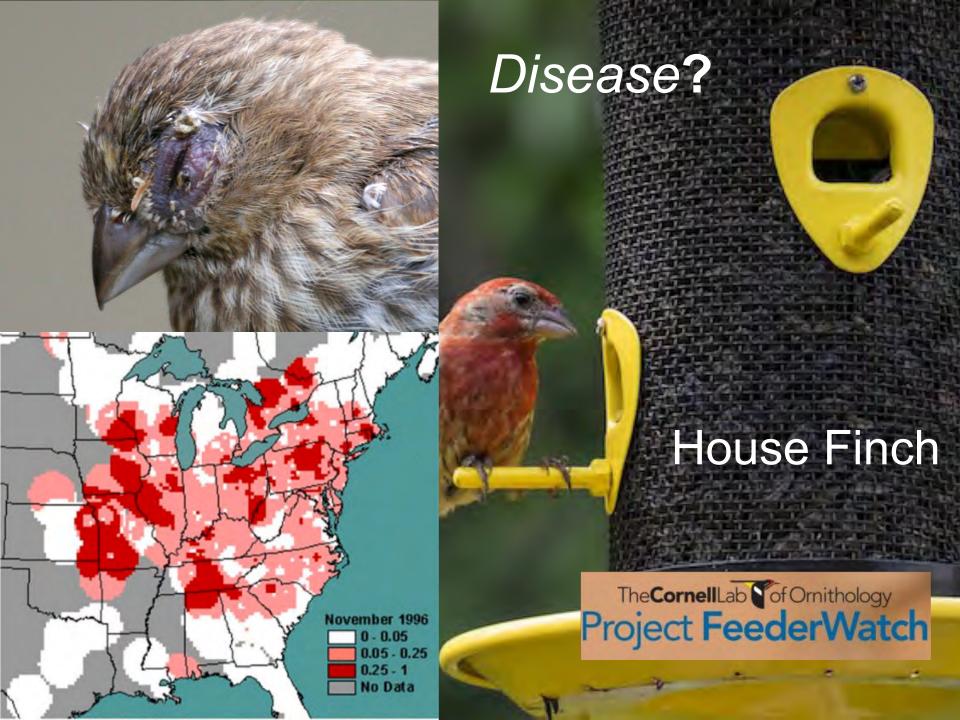
Natural foods preferred

Parents have no junk food policy

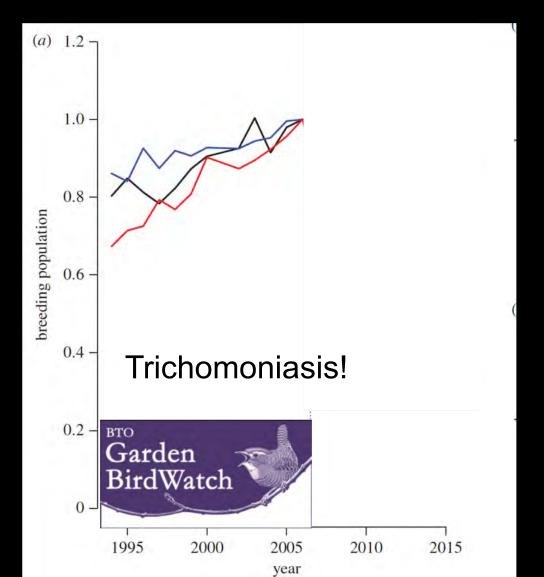
Strong evidence of dependency among the humans!

Feeder birds are healthier, but...





Greenfinch: seed led recovery; feeder led decline









Diet switching:
Natural propensity meets modern supply

Plenty happens when we feed birds!

We reconstruct bird communities

Some expand their range

They are usually more healthy

They do not become dependent



They reproduce more

They survive winter better

Some forget to migrate

...but are also more susceptible to disease

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What we do in our gardens.
..influences birds in our street
     suburb
        town
            region
                state
                   country
                      continent
      Our feeders are part of vast network
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