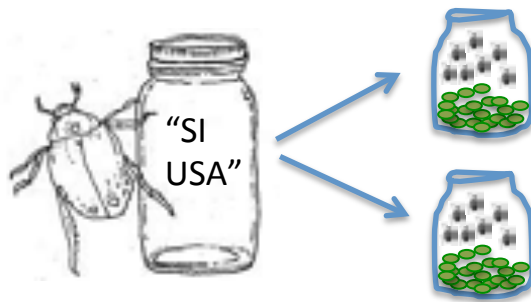


Kin selection experiment – Fall 2015

Date

Mon 14 Sept:

Recharged SI USA population: created 3 jars, each with 150 g mung beans and approx. 250-350 beetles



By Fri 2 Oct:

By day 18, transferred beans from one of the stock jars into 50 48-well plates of virgin chambers (VCs).

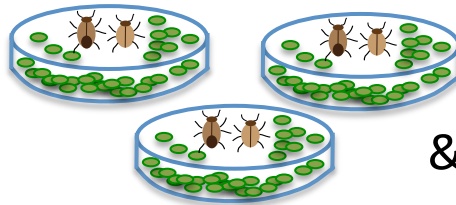


Sun 4 Oct – Weds 7 Oct:

From days 20-23, monitored hatch daily: Marked hatched cells and record daily numbers of ♂s and ♀s.

Weds 7 Oct:

Using beetles that hatched on Tues 6 Oct (day 22), placed 190 pairs of randomly-selected ♂s and ♀s into 190 60-mm petri dishes with 75-80 mung beans each.



1 ♀ and 1 ♂ per dish
x 190 dishes



On same day, created two new jars of SI USA beetles (150 g beans and 250-350 adults) from the remaining 14/9 stock jars

Fri 9 Oct:

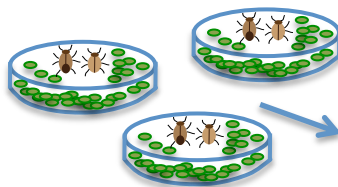
Removed all pairs from petris after 48 hours.



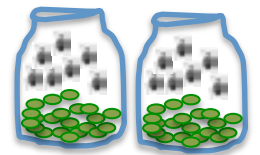
Remove beetles

Fri 23 Oct:

By day 16, transferred beans from the 180 best looking petri dishes into 180 48-well VCs. Mark each VC with the # that corresponds to the petri the beans come from (#1-180).



N = 180 VCS



N = 110
VCS

On same day, put beans from the two 7/10 stock jars into up to 110 VCs. Stored the VCs separately to avoid confusion.

Mon 26 Oct – Mon 2 Nov:

From days 19-26, monitored hatch daily and marked hatched cells (except not Sun). On Thurs 29 Oct and Fri 30 Oct, also noted daily numbers of ♂s and ♀s.

Record hatch daily for all VCs



Fri 30 Oct:

On day 23, although insufficient number of ♂s hatched that day, put ♂s together for one day in 100-mm petris with 120 beans.

Sat 31 Oct:

Reconfigured ♂s as necessary and added one ♀ (hatched on Fri) to each dish.

Mon 2 Nov:

2 days after pairing, put together new trios of brothers and nonrelated ♂s for RF and NF treatments

Tues 3 Nov:

3 days after pairing, replaced old ♂s with new ♂s. Discarded all dishes with dead ♂s or ♀s. In retrospect I wish we'd kept dishes with dead ♀s and also checked the dishes on Sun 1 Nov and Mon 2 Nov. Otherwise no way to know when those ♀s had died!

Weds 4 Nov – Mon 9 Nov:

Checked dishes daily and recorded date of death of all ♀s until all of them were dead. After everyone died, removed all dead adults from the dishes.

Mon 7 Dec:

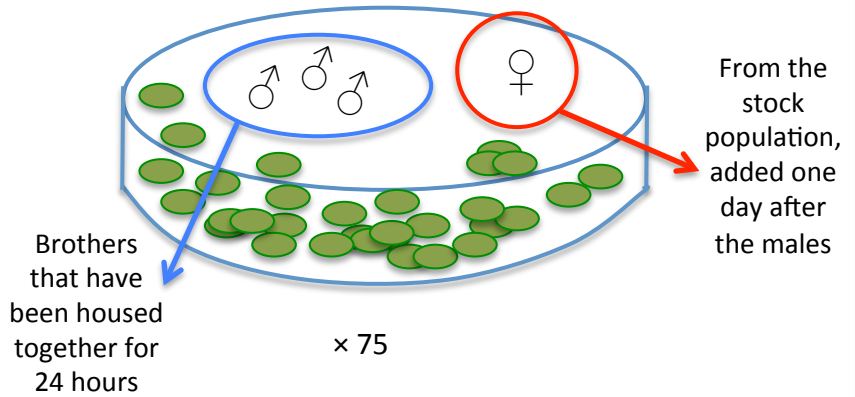
37 days after initial pairing, froze all of the petri dishes. This killed the eclosed young to make it easier to count them.

Tues 8 Dec onward:

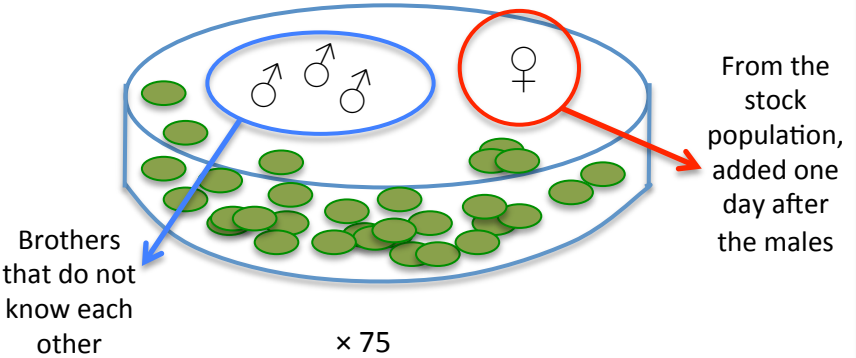
2 days after freezing, recorded the number of dead eclosed beetles in all of the petris. This is the lifetime reproductive success of the female.

Four treatments

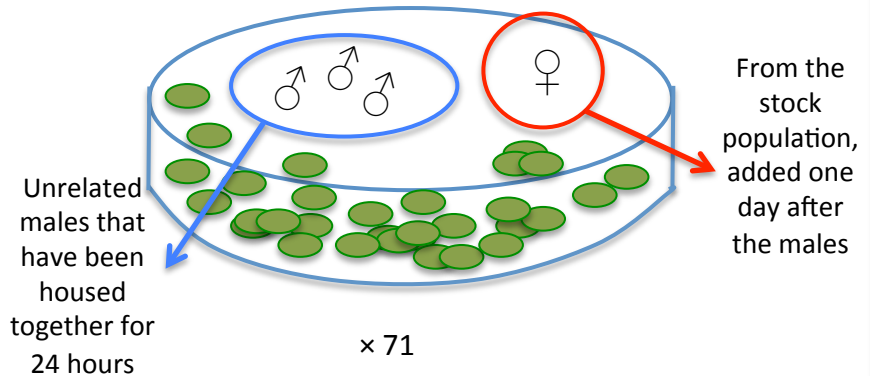
1. Related-familiar (RF): three virgin brothers housed together in a petri dish for 24 hrs before adding an unrelated ♀



2. Related-unfamiliar (RU): three brothers that do not know each other are added to dish with a ♀



3. Nonrelated-familiar (NF): three unrelated ♂s housed together for 24 hrs before adding a ♀



4. Nonrelated-unfamiliar (NU): three unrelated ♂s that do not know each other are added to a dish with a ♀

