Supplement:

Table S1. The spatial and social phenotypes measured on a daily basis in our animals, from age 15 to 58 days.

	Phenotype	Description
Spatial Phenotypes	**Resource Zones Visited**	The number of resource zones visited by an animal each night. Range = 0-16, mean = 6.0. Detected via at least one RFID read at a given zone on a given night.
	Transitions Between Zones	The number of times that an animal moved from one resource zone to another, each night. Range = 0-141, mean = 16. Detected by a change in an animal's zone location between subsequent RFID reads.
	Transitions Between Neighborhoods	The number of times that an animal moved from one neighborhood of resource zones to another, each night. Range = 0-26, mean = 2.9. Detected by a change in an animal's neighborhood location between subsequent RFID reads (see Figure 1 for neighborhood distribution).
	Time of First Nightly Transition	The number of hours past noon on a given night that an animal made its first transition between resource zones. 'NA' if no transitions occurred. Range = 2.1-23.1, mean = 5.7. Detected as the time stamp for the first transition each night.
	Proportion of Reads in Top Zone	The proportion of RFID reads that were recorded from an animal in its most visited zone (the zone with the most RFID reads for that animal). 'NA' if an animal did not visit any zones on a given night. A measure of spatial fidelity. Range = 0.15-1, mean = 0.62.
	Proportion of Reads in Top Neighborhood	The proportion of RFID reads that were recorded from an animal in its most visited neighborhood (the neighborhood with the most RFID reads for that animal). 'NA' if an animal did not visit any zones on a given night. A measure of spatial fidelity. Range = 0.32-1, mean = 0.89.
Basic Social Phenotypes	**Number of Males Met**	The number of males that an animal encountered in or around a resource zone each night. Range = 0-27, mean = 9.6. Measured based on the number of males that a given individual was inferred to overlap with for at least 1 second at a resource zone.
	Number of Females Met	The number of females that an animal encountered in or around a resource zone each night. Range = 0-35, mean = 12.3. Measured based on the number of males that a given individual was inferred to overlap with for at least 1 second at a resource zone.
	Total Number of Animals Met	The sum of the number of males and females that an animal met each night. Range = 0-54, mean = 21.9.
	Proportion Time Spent Alone	The proportion of all time that we inferred an animal spent in or around a resource zone for which it was the only animal inferred to be present. Range = 0-1, mean = 0.40.
	Proportion Time Spent with the Opposite Sex	The proportion of all time that we inferred an animal spent in or around a resource zone for which at least one member of the opposite sex was inferred to also be present. Range = 0-1, mean = 0.39.
	Territory Score	For each zone we calculated the proportion of all same-sex RFID reads that occurred at each zone. We then calculated the proportion of those reads that originated with each animal (sum = 1). For each night, we then summed this value across all 16 resource zones for each animal. For males, this is a measure of

		competitive ability. For females, interpretation is difficult, but it is most closely a measure of isolation from other females. Range = 0-2.7, mean = 0.3. See methods for additional details.
Social Network Phenotypes	**Edge Strength**	The average strength of the connection between each animal and all other animals that it was connected to in the network each night. A measure of the strength of its average social relationship. Range = 0-4.1, mean = 0.5.
	Opposite Sex Edge Strength	The average strength of the connection between each animal and all other animals of the opposite sex that it was connected to in the network each night. A measure of the strength of its average social relationship. Range = 0-3.3, mean = 0.2.
	Eigenvector Centrality	A measure of how connected an animal was to other members of the network, taking into consideration the strength of connectivity of each animal that the focal animal was connected to. Range = 0-1, mean = 0.28.
	Betweenness Centrality	A measure of centrality that is based on the extent to which an animal lay along the shortest path between other pairs of animals in the network. Range = 0-576, mean = 29.
	Closeness Centrality	A measure of centrality based on the length of the average path between any given animal and other animals in the network. Calculated as the inverse sum of the path length (number of connective steps) between the focal animal and each other animal in the network. Range = 0.27-1, mean = 0.61.

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615 **Table S3.** Loadings of each of the 16 phenotypes included in the principal component analysis onto
616 principal components 1 and 2

Phenotype	PC1 Loading	PC2 Loading
Resource Zones Visited	0.35	0.03
Total Number of Animals Met	0.34	0.24
Number of Females Met	0.33	0.20
Transitions Between Neighborhoods	0.30	0.05
Transitions Between Zones	0.28	0.28
Number of Males Met	0.27	0.25
Betweenness Centrality	0.24	0.20
Eigenvector Centrality	0.20	0.23
Proportion Observed Time Spent Alone	0.20	-0.36
Resource Access	0.07	0.08
Closeness Centrality	-0.12	0.37
Opposite Sex Edge Strength	-0.18	0.42
Proportion Observed Time Spent with the Opposite Sex	-0.20	0.36
Edge Strength	-0.22	0.40
Proportion of Reads in Top Neighborhood	-0.23	-0.03
Proportion of Reads in Top Zone	-0.29	0.05

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619 **Table S3**. The relationship between average adult resource access and each other adult phenotype
620 measured for each sex.

Phenotype	Sex	R^2	p value
Average Opposite Sex Edge Strength	Male	0.69	**< 0.0001**
	Female	0.02	0.32
Nightly Females Met	Male	0.68	**< 0.0001**
	Female	0.06	0.09
Number of Nightly Transitions Between Zones	Male	0.65	**< 0.0001**
	Female	0.05	0.11
Total Nightly Animals Met	Male	0.35	**< 0.0001**
	Female	0.04	0.16
Time of First Nightly Transition Between Zones	Male	0.37	**< 0.0001**
	Female	0.07	0.07
Betweenness Centrality	Male	0.27	**< 0.0001**
	Female	0.00	0.75
Closeness Centrality	Male	0.28	**< 0.0001**
	Female	0.03	0.25
Number of Nightly Transitions Between Neighborhoods^	Male	0.22	**0.002**
	Female	0.10	**0.03**
Proportion of Nightly Reads in Top Neighborhood	Male	0.34	**< 0.0001**
	Female	0.23	**0.0008**
Average Edge Strength	Male	0.32	**< 0.0001**
	Female	0.27	**0.0002**
Eigen Vector Centrality	Male	0.15	**0.01**
	Female	0.09	**0.04**
Proportion of Observed Time Spent With a Member of the Opposite Sex	Male	0.08	0.06
	Female	0.04	0.20
Nightly Males Met	Male	0.01	0.50
	Female	0.00	0.87
Nightly Resource Zones Visited	Male	0.00	0.78
	Female	0.08	0.06
Proportion of Nightly Reads in Top Resource Zone	Male	0.05	0.13
	Female	0.11	**0.02**
Proportion of Observed Time Spent Alone	Male	0.16	**0.009**
	Female	0.31	**< 0.0001**

621 ^Analysis excludes animal 3059-1, which was an extreme outlier on this metric

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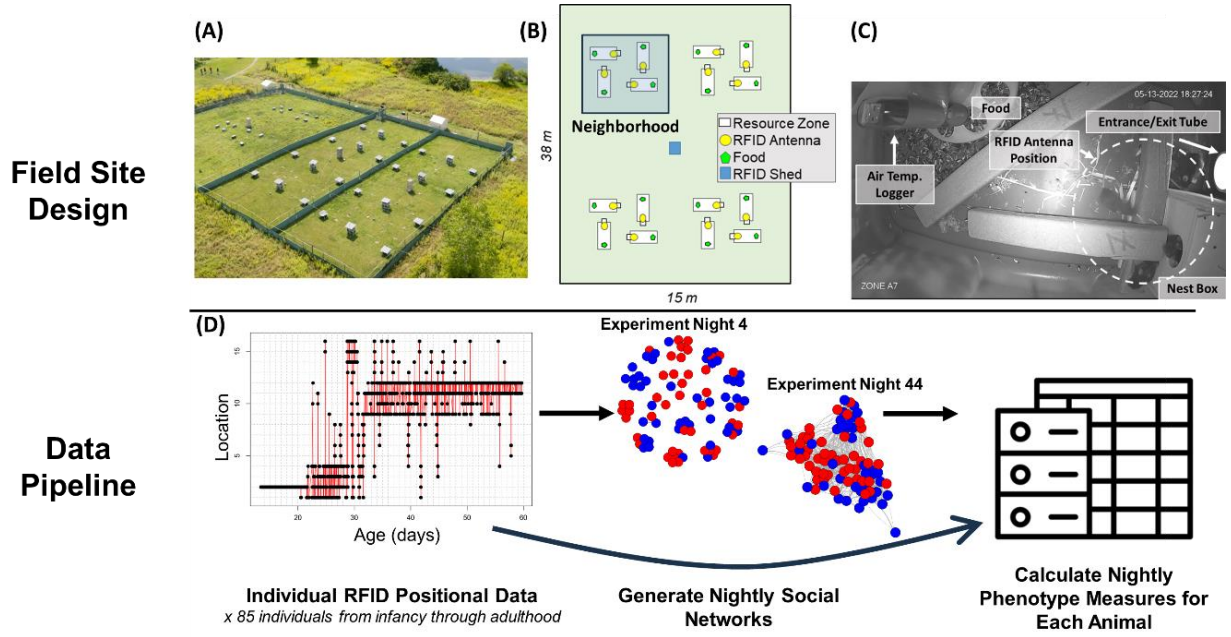
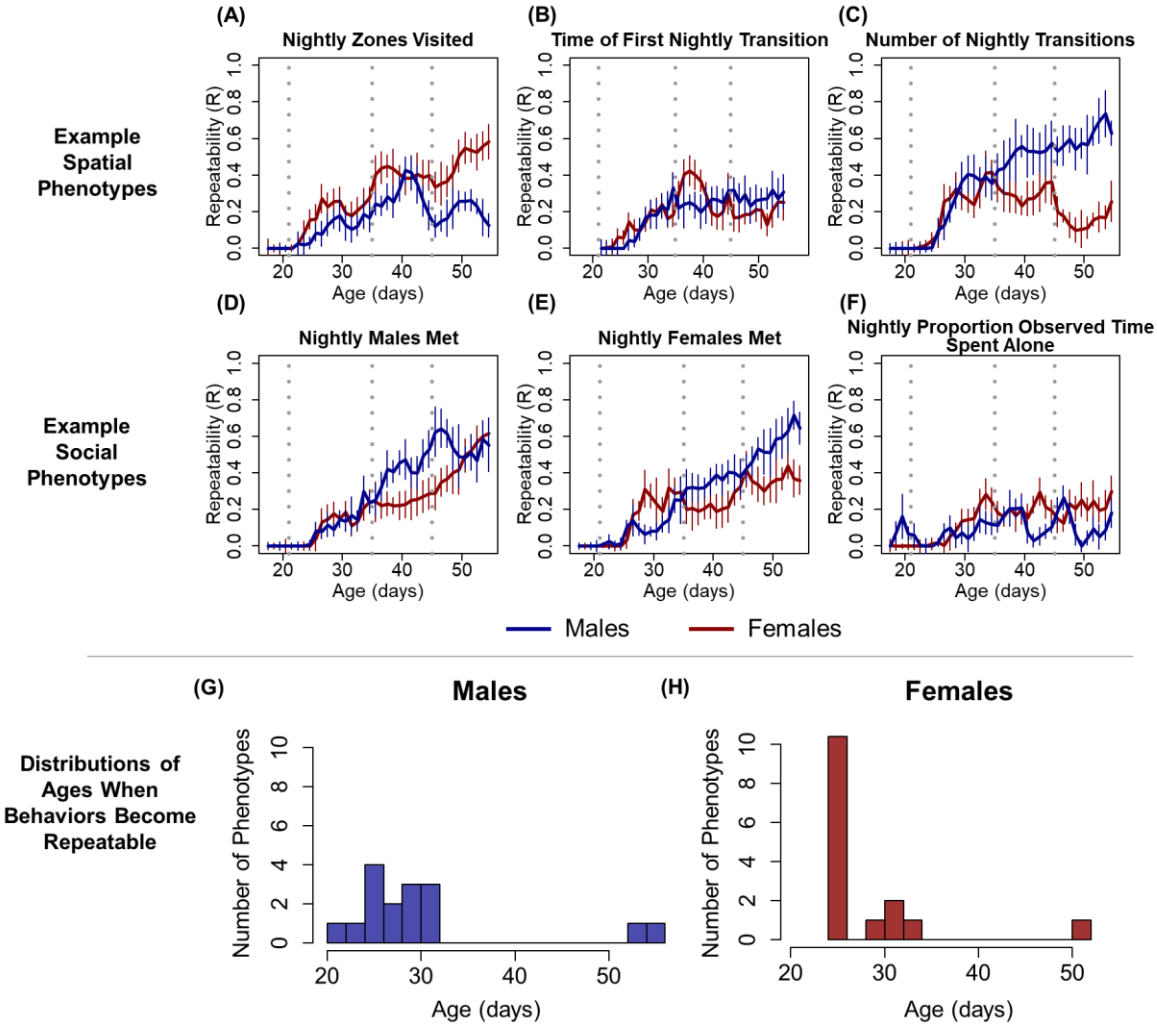


Figure S1. The experimental approach. (A) An aerial view of our field site. Note that the configuration of resource zones in this photograph is different from the configuration in this experiment. (B) Schematic layout of our field enclosure in this experiment (not to scale). We placed litters, along with their mothers inside of the nest box in one of 16 resource zones, which were distributed into four "neighborhoods" of four zones each. (C) An interior view of one of our resource zones. (D) Overview of data processing pipeline for our experiment. Example RFID positional data show the known location of a single individual in our enclosure over the course of the experiment. Each point represents an RFID read at a given resource zone (y-axis). Red lines between points indicate transitions between resource zones.



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635 **Figure S2. Both males and females developed repeatable individual differences in spatial and**
636 **social phenotypes, beginning in the juvenile period.** (A-F) Examples of repeatability data for four
637 representative spatial and social phenotypes. The repeatability measure on the y-axis controls for
638 maternal/litter identity. Each point represents individual repeatability estimates from each sex
639 during a sliding five-day window, with the x-axis value representing the center of that window. Error
640 bars indicate standard error of repeatability estimates. Vertical dashed lines indicate approximate
641 ages of weaning (21 days), sexual maturity (35 days), and first successful mating (46 days). (G-H)
642 The distributions of the ages at which behaviors became repeatable for males and females.

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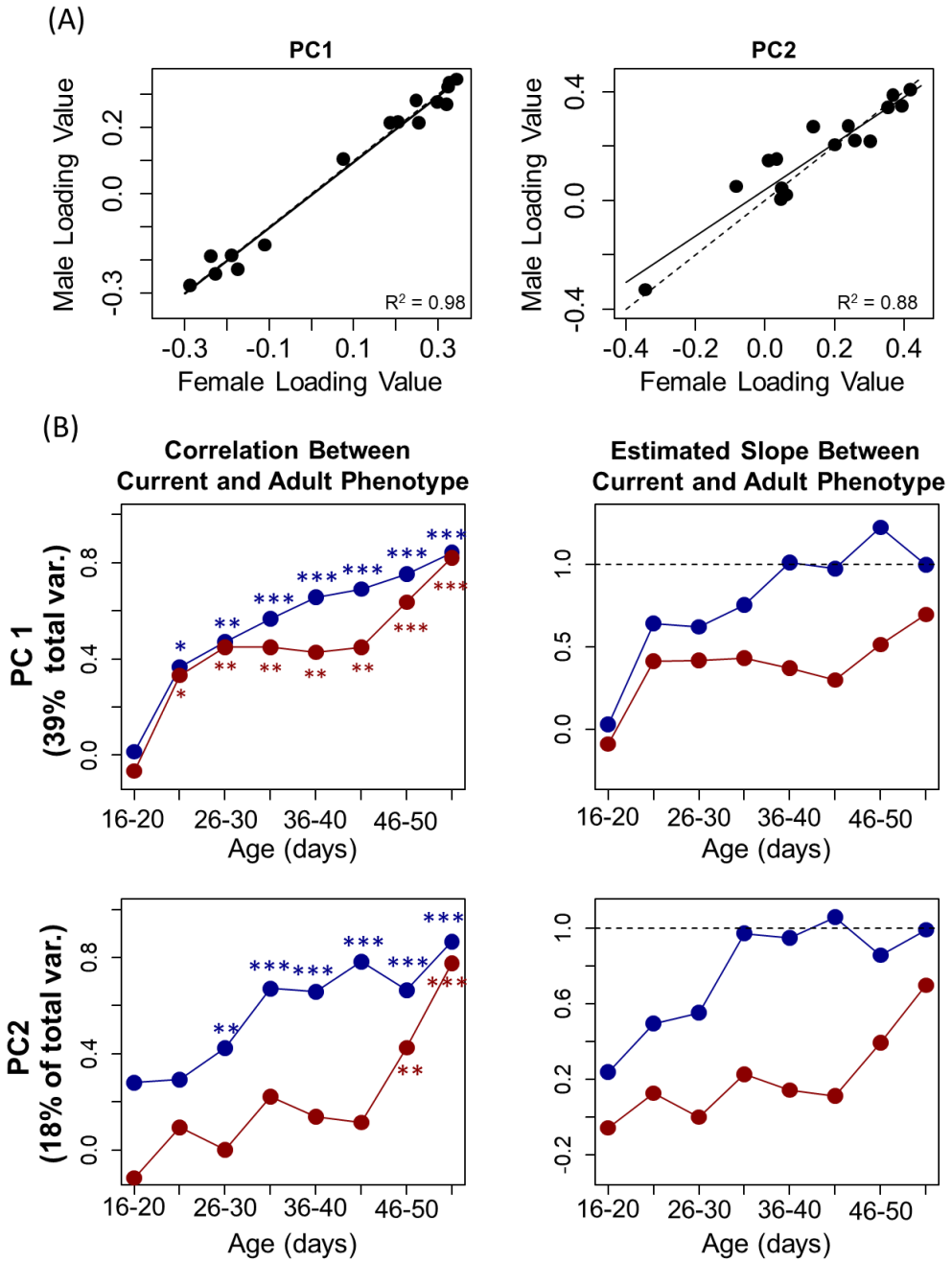

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645 **Figure S3.** Results in Figure 1 are unchanged if we use a sex-specific principal components
646 approach. (A) Loading coefficients of individual phenotypes are extremely similar in male-specific
647 and female-specific principal components 1 and 2. Solid line indicates modeled correlation,
648 dashed line indicates a one-to-one theoretical ideal. (B) The same analyses as in Figure 1B, except
649 using sex-specific principal components 1 and 2. The correlation between earlier and adult
650 behavior is stronger in males for both PC1 and PC2 and the slope of the relationship between
651 earlier and adult behavior is closer to 1. Asterisks denote significance of the correlations depicted
652 in each point (* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$).

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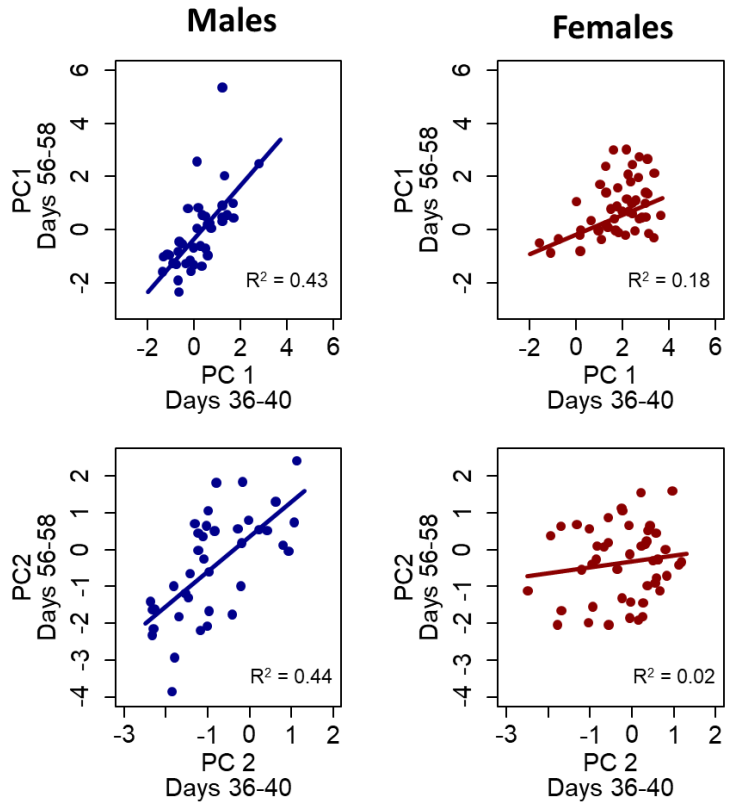

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655 **Figure S4. An example of the sets of models contained in Figure 1B.** Here we compare the
656 relationship between behavior immediately after sexual maturity (age 36-40 days) and later
657 behavior in adulthood at the end of the experiment (days 56-68 days). For both PC1 (top row) and
658 PC2 (bottom row) the relationship is stronger and the slope estimates are closer to 1.00 for males
659 as compared to females.

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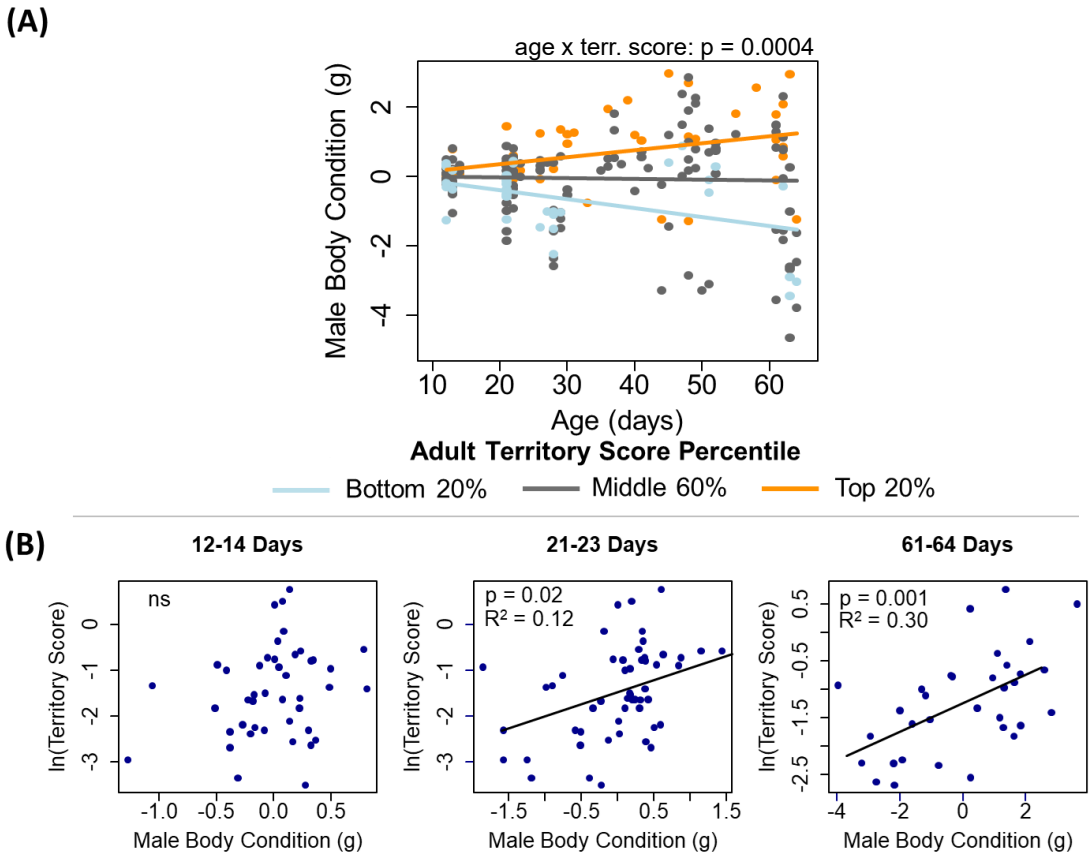

663 **Figure S5.** Small differences in initial male body mass are magnified by differential territorial
664 access. (A) The same data as in Figure 3C, but here presented as individual data points. Male adult
665 territory scores are predicted by small differences in body mass in early life, a difference that is
666 magnified over time. The y-axes represent deviations from age-predicted body mass. (B) The
667 strength of the relationship between body condition and adult territory score (days 46-58) increases
668 as males age. Although we collected opportunistic body masses from individuals throughout the
669 experiment, we collected body masses from all animals in the enclosure at three different points:
670 (1) prior to release (age 12-14 days), at weaning (21-23 days), and after we ended the experiment
671 (61-64 days). Initial body condition in infancy did not predict final territory scores (consistent with
672 individuals starting out on an approximately even playing field. However, as males aged, the
673 correlation between territorial behavior and body mass increased in strength, consistent with a
674 competitively induced feedback loop.

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