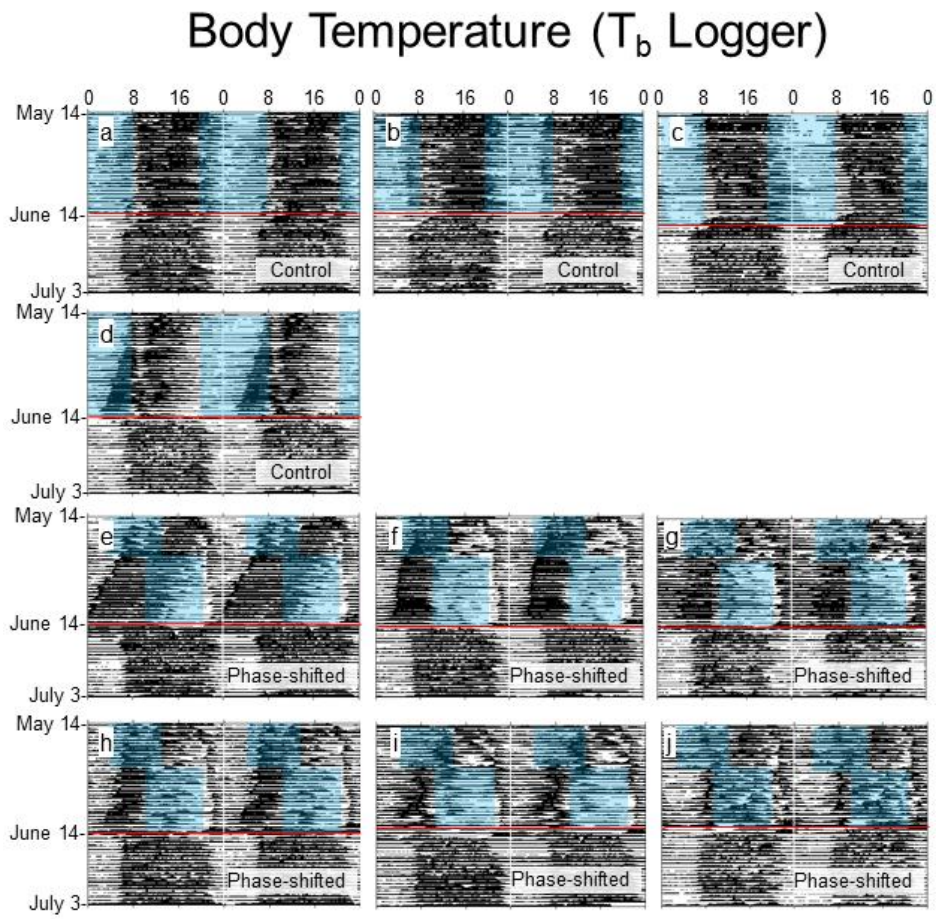


**Fig. S1. Double-plotted actograms of body temperature from four additional control animals (a-d) and six additional treatment animals (e-j).** The x-axis is the time of day (hour) and black bars indicate intervals when $T_b$ was above the daily mean. Control animals were maintained in captivity on a 13L:11D cycle with lights off (transparent blue boxes) between 2100 to 0800 from May 14 to June 13 or 14. The experimental animals were maintained on a 13L:11D cycle with lights off (transparent blue boxes) between 0300 to 1400 from May 14 to May 26 (a 6h delay) and between 0900 to 2000 from May 27 to June 13 or 14 (a 12h delay). All data below the red line depict patterns following release from captivity on June 13 or 14 until July 3 when we began recapturing animals. One control animal had a free-running $T_b$ rhythm in captivity (d) and one animal from the treatment group did not exhibit an obvious free-running pattern but circadian rhythms appeared disrupted (j); these animals were excluded from our analyses. Following their release, all animals rapidly re-entrained with the natural day despite continuous daylight.

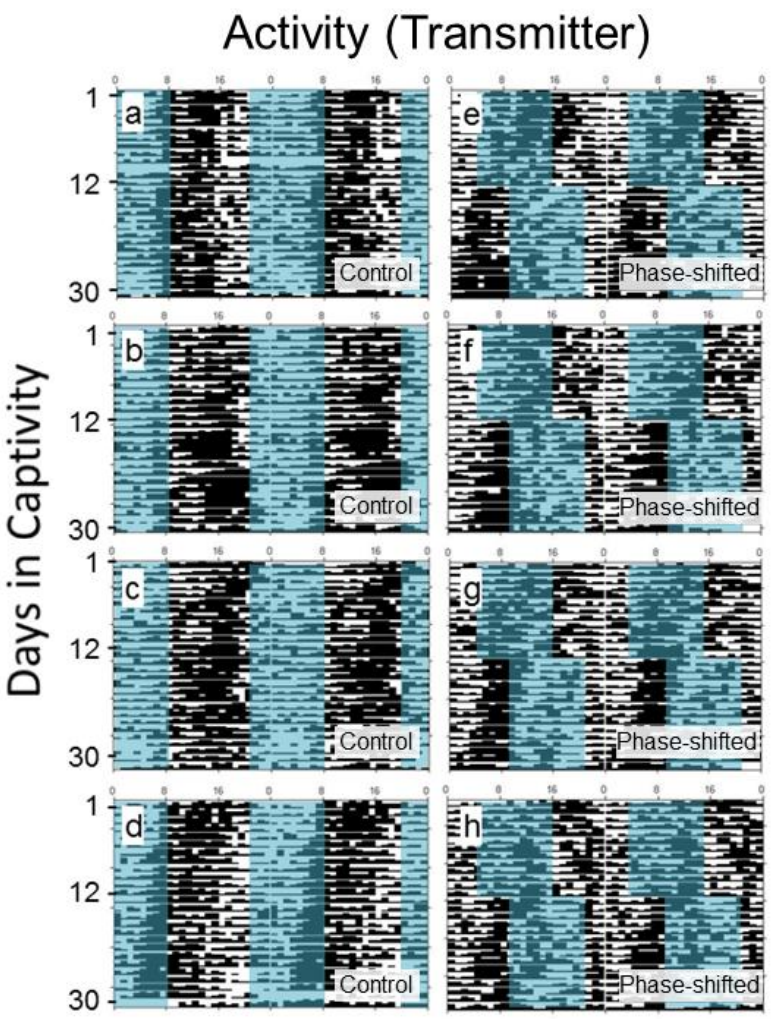


**Fig. S2. Double-plotted actograms of activity during captivity from the four control animals (a-d) and four treatment animals (e-h) equipped with DSI activity transmitters.** The x-axis is the time of day (hour) and black bars indicate intervals when activity was above the daily mean. Control animals were maintained in captivity on a 13L:11D cycle with lights off (transparent blue boxes) between 2100 to 0800 from May 14 to June 13 or 14. The experimental animals were maintained on a 13L:11D cycle with lights off (transparent blue boxes) between 0300 to 1400 from May 14 to May 26 (a 6h delay) and between 0900 to 2000 from May 27 to June 13 or 14 (a 12h delay). The control animal that had a free-running Tb rhythm in captivity (Fig S1d), also had a free-running activity rhythm (Fig S2d). The treatment animal with disrupted Tb rhythms (Fig S1i), also had disrupted and split activity rhythms (Fig S2h).

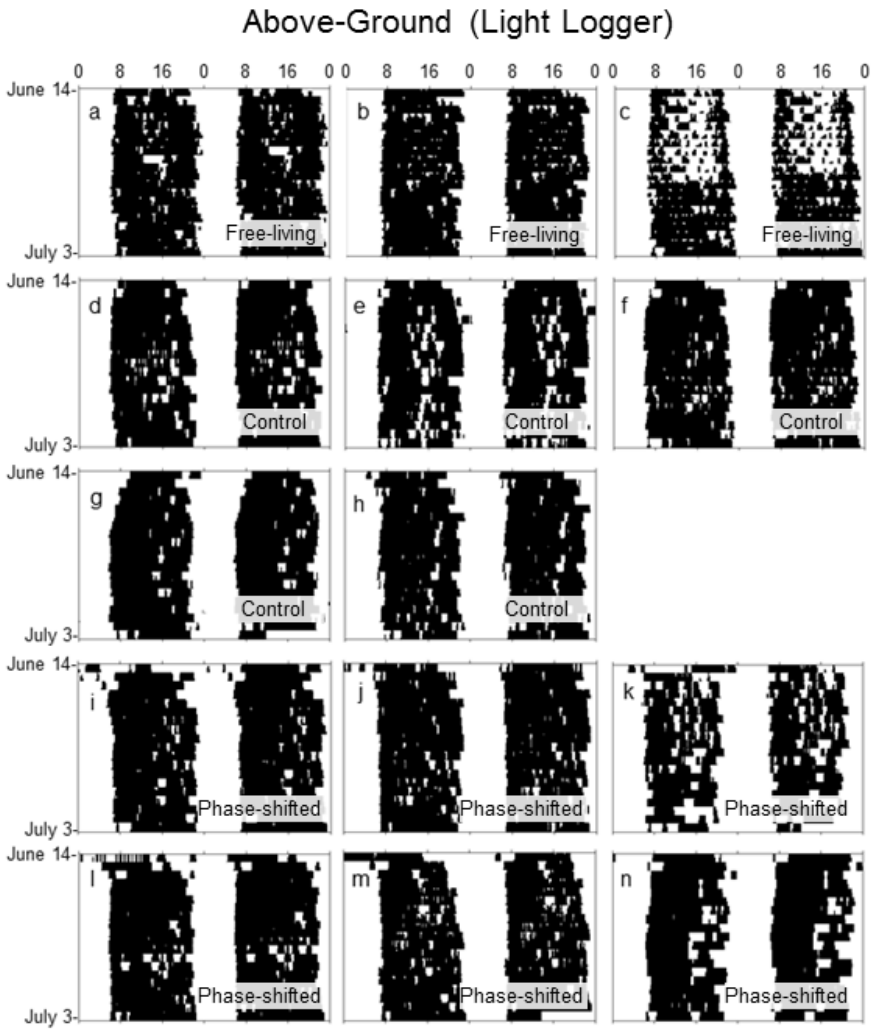


**Fig. S3. Double-plotted actograms of above-ground activity, based on light logger data, from three additional free-living AGS that were never brought into captivity (a-c), five additional control animals (d-h) and six additional phase-shifted (treatment) animals (i-n).** All data shown for experimental and control animals is following release from captivity. The x-axis is the time of day (hour) and black bars indicate intervals when animals were on the surface exposed to light. All data shown depict patterns following release from captivity on June 13 or 14 until July 3 when we began recapturing animals; data for free-living animals is from June 14 to July 3. One control animal had a free-running $T_b$ rhythm in captivity (h) and one animal from the treatment group did not exhibit an obvious free-running pattern but circadian $T_b$ rhythms appeared disrupted (j); these animals were excluded from our analyses. Following their release, all animals rapidly re-entrained with the natural day despite continuous daylight.

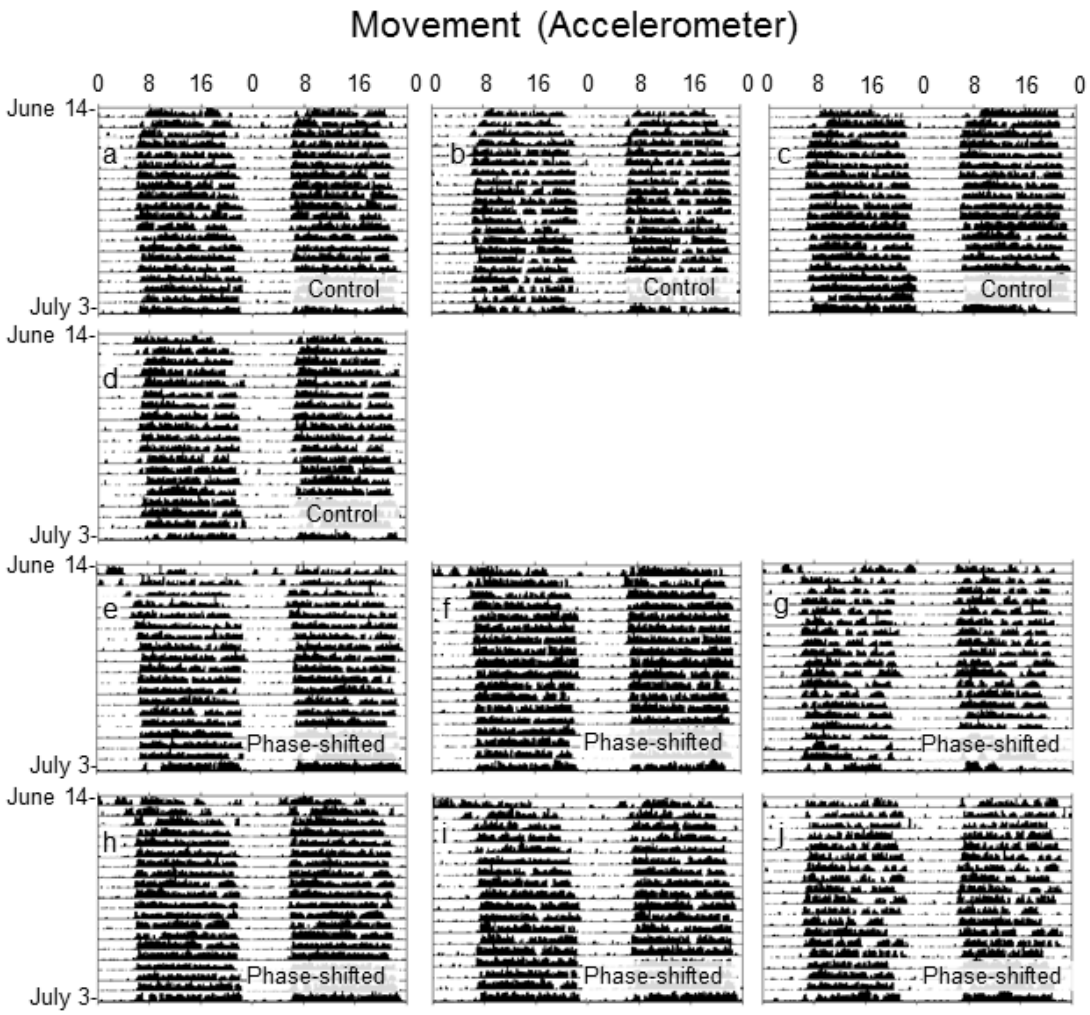


**Fig. S4. Double-plotted actograms of ODBA (an index of movement), based on accelerometry data, from four additional control animals (a-d) and six additional phase-shifted (treatment) animals (e-j).** All data shown is following release from captivity. The x-axis is the time of day (hour) and black bars indicate intervals (10min blocks) of activity (ODBA). All data shown is following release from captivity on June 13 or 14 until July 3 when we began recapturing animals. One control animal had a free-running $T_b$ rhythm in captivity (d) and one animal from the treatment group did not exhibit an obvious free-running pattern but circadian $T_b$ rhythms appeared disrupted (j); these animals were excluded from our analyses. Following their release, all animals rapidly re-entrained with the natural day despite continuous daylight.