The following are descriptions of the supplementary files and folders associated with the study "*Emergent Collective Behavior Evolves More Rapidly Than Individual Behavior Among Acorn Ant Species.*"

1. **Table_S1_collective_activity.csv** – The ultradian behavioral metrics from all colony-level time series used in the study. Each row corresponds to a different colony-level time series. Collection locality details and the date of collection for each colony are also provided in this table. The approximate number of ants in each nest at the time of each recording is also listed on each row. The columns with "trim" in their heading denote behavioral metrics calculated with the 8-hour colony-level time series.
2. **Table_S2_individual_activity.csv** – The ultradian behavioral metrics from all individual-level time series used in the study.
3. **Table_S3_individual_velocity.csv** – The mean moving velocity metrics from all individuals used in the open field assay.
4. **Table_S4_interspecific_variation.csv** – The statistical results of our LME models assessing interspecific variation in the five behavioral metrics from our study.
5. **Table_S5_voucher_data.xlsx** – The list of voucher specimens that provided genetic material for this study.
6. **Table_S6_sequencing_statistics.xlsx** – A table of sequencing information for each taxon in the phylogeny. Rows listed as being from "this study" in the "reference" column indicate that new sequence data from these samples was obtained for the present study. These individual ants were not necessarily used for the behavioral experiments.
7. **Table_S7_calibrations.xlsx** – A table containing calibration details for our phylogeny.
8. **Table_S8_colony_size_results.csv** – The statistical results of our supplementary colony size analysis.
9. **Table_S9_collective_activity_disassembly.csv** – The ultradian behavioral metrics from all colony-level time series from the disassembly experiment. Each row corresponds to a different colony-level time series.
10. **Table_S10_individual_activity_disassembly.csv** – The ultradian behavioral metrics from all individual-level time series from the disassembly experiment.
11. **Table_S11_collective_activity_2024.csv** – The ultradian behavioral metrics from all colony-level time series from the small-nest experiment.
12. **Table_S12_Tiny_2024.csv** – The ultradian behavioral metrics from all individual-level time series from the small-nest experiment.
13. **Table_S13_species_summaries.xlsx** – A summary table that lists the number of unique colonies/individuals of each species as well as the individual-level and colony-level activity trait estimates for each species used in the main experiment and the small-nest experiment. The activity trait estimates were calculated for the full length of each time-series using the procedures described in the main text and SI methods.
14. **doering_25t_divergence_names.tre** – The phylogenetic tree file generated for our study.
15. **Comparative_analysis_ultradian.Rmd** – Code for our statistical analyses written in the R language and presented as an R markdown file.
16. **Comparative_analysis_ultradian.html –** Output of our statistical analyses**.**
17. **comparative_time_series_analysis.m** – MATLAB code used to calculate the behavioral metrics of the colony-level and individual-level ultradian time series.

18. **ind_exploration_analysis.m** – MATLAB code used to calculate the mean moving velocity of the individual trajectory data from the open field assay.
19. **Collective_activity** – A folder containing the activity time series of colonies used in this study. Each CSV file within this folder contains a unique time series. The alphanumeric code appearing at the beginning of each file designates the colony ID of that particular time series.
20. **Individual_activity** – A folder containing the activity data of isolated individual ants used in this study. Every file contains the data from a different individual. Each row of a given file provides the *x* and *y* coordinates of the focal ant in pixels at frame *t*. Activity time series were calculated from each file using the MATLAB script "comparative_time_series_analysis_individual.m", which computes the Euclidian displacement of the focal ant between every successive pair of time points in her data record.
21. **Exploration_data** – A folder containing the trajectory data (pos.txt files), body size data (body.txt files), and trajectory visualizations (png files) of individual ants used in our open field assay. Each numerical prefix (e.g., 6_20_1) denotes the individual ant associated with the data in a particular file. Each row of a given file provides the *x* and *y* coordinates of the focal ant in pixels at frame *t*. Each body size data file contains the body size estimates (total no. of pixels) of the focal individual at each time point she was detected during the open field assay. This was used to standardize velocity by body size. The trajectory visualizations use the tracking data to depict the path walked by each ant during her open field assay as a blue curve. The blue circle in each image denotes the starting location of the ant, and the red circle denotes the final location of the ant.
22. **Disassembly** – A folder containing the activity time series from our disassembly experiment. There are two sub-folders: Individual_time_series and Collective_time_series. Each CSV file within the two sub-folders corresponds, respectively, to either a unique isolated individual ant or a unique colony. The alphanumeric code appearing at the beginning of each file designates the colony ID or colony of origin (for workers) of each time series.
23. **Small_nest_collective** – A folder containing the colony-level activity time series from our small-nest experiment.
24. **Small_nest_individual** – A folder containing the individual-level activity time series from our small-nest experiment.
25. **Video_S1.mp4** – A 14.5 hour recording of one of the colonies used in the study (colony ID: JRCT4, Species: *Temnothorax rudis*) along with a concurrent animation of the collective activity time series associated with this particular recording. The recording has been sped up by approximately 153,429% to help easily visualize the cyclic activity of the colony.
26. **rates_resample.csv** – 10,000 bootstrapped rate estimates for the two pairs of colony-level and individual-level behavioral traits (i.e., individual-level period, colony-level period, individual-level rhythmicity, colony-level rhythmicity). Rate estimates for the individual-level velocity trait from the open field assay are included as well. The "sigsq" column contains the rate estimates, the source column indicates whether the given rate estimate is for a colony-level or individual-level trait, and the trait column indicates the behavioral trait.

27. **rates_resample_small_nest_larvae.csv** – 10,000 bootstrapped rate estimates for the two pairs of colony-level and individual-level behavioral traits using the individual-level data from workers in the larvae treatment of the small-nest experiment. The “sigsq” column contains the rate estimates, the source column indicates whether the given rate estimate is for a colony-level or individual-level trait, and the trait column indicates the behavioral trait.
28. **rates_resample_small_nest_no_larvae.csv** – 10,000 bootstrapped rate estimates for the two pairs of colony-level and individual-level behavioral traits using the individual-level data from workers in the no-larvae treatment of the small-nest experiment. The “sigsq” column contains the rate estimates, the source column indicates whether the given rate estimate is for a colony-level or individual-level trait, and the trait column indicates the behavioral trait.