

Supplement materials for

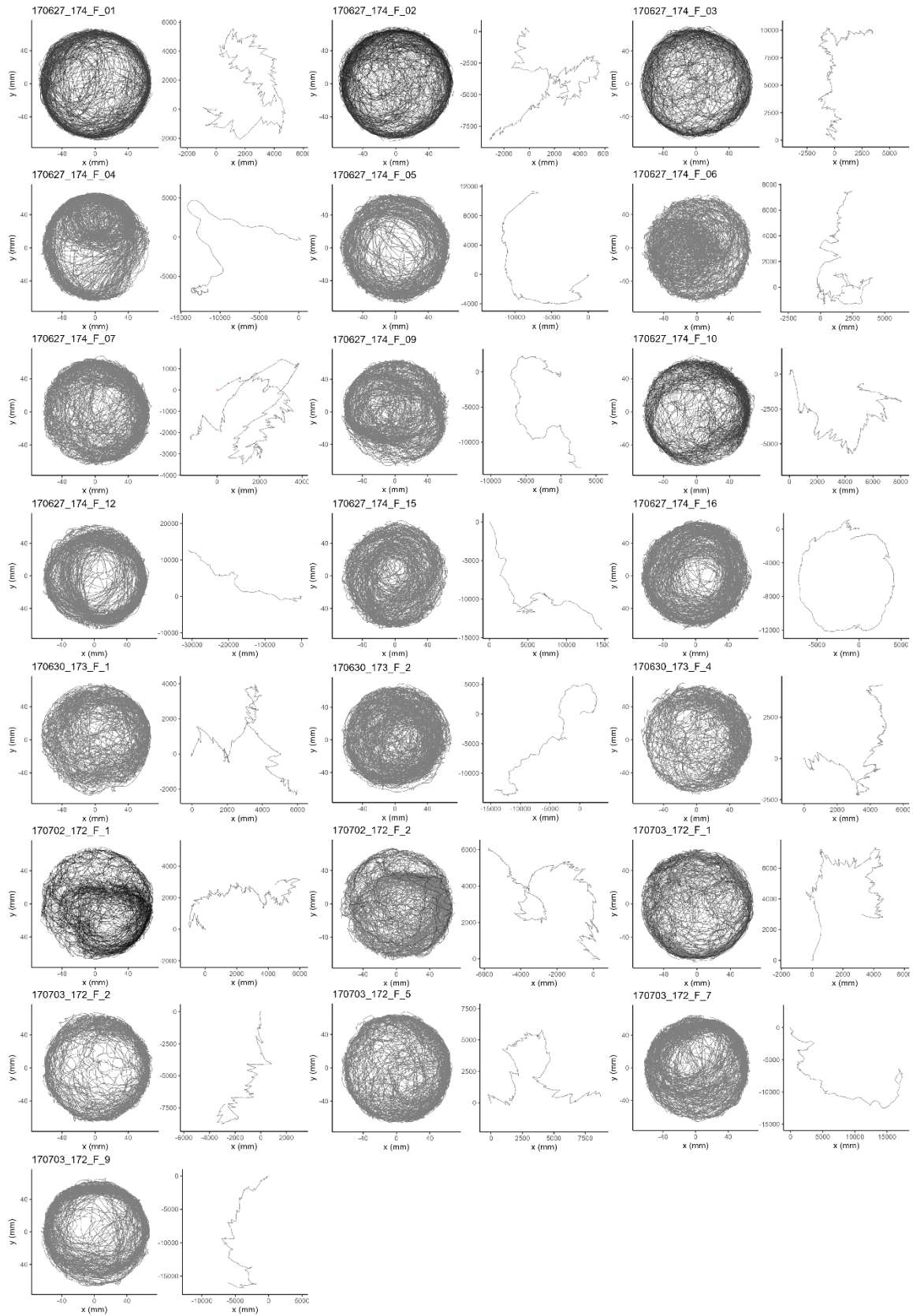
**Evaluating mate encounter and walking dispersal dynamics of termites using posture tracking and behavioral simulation**

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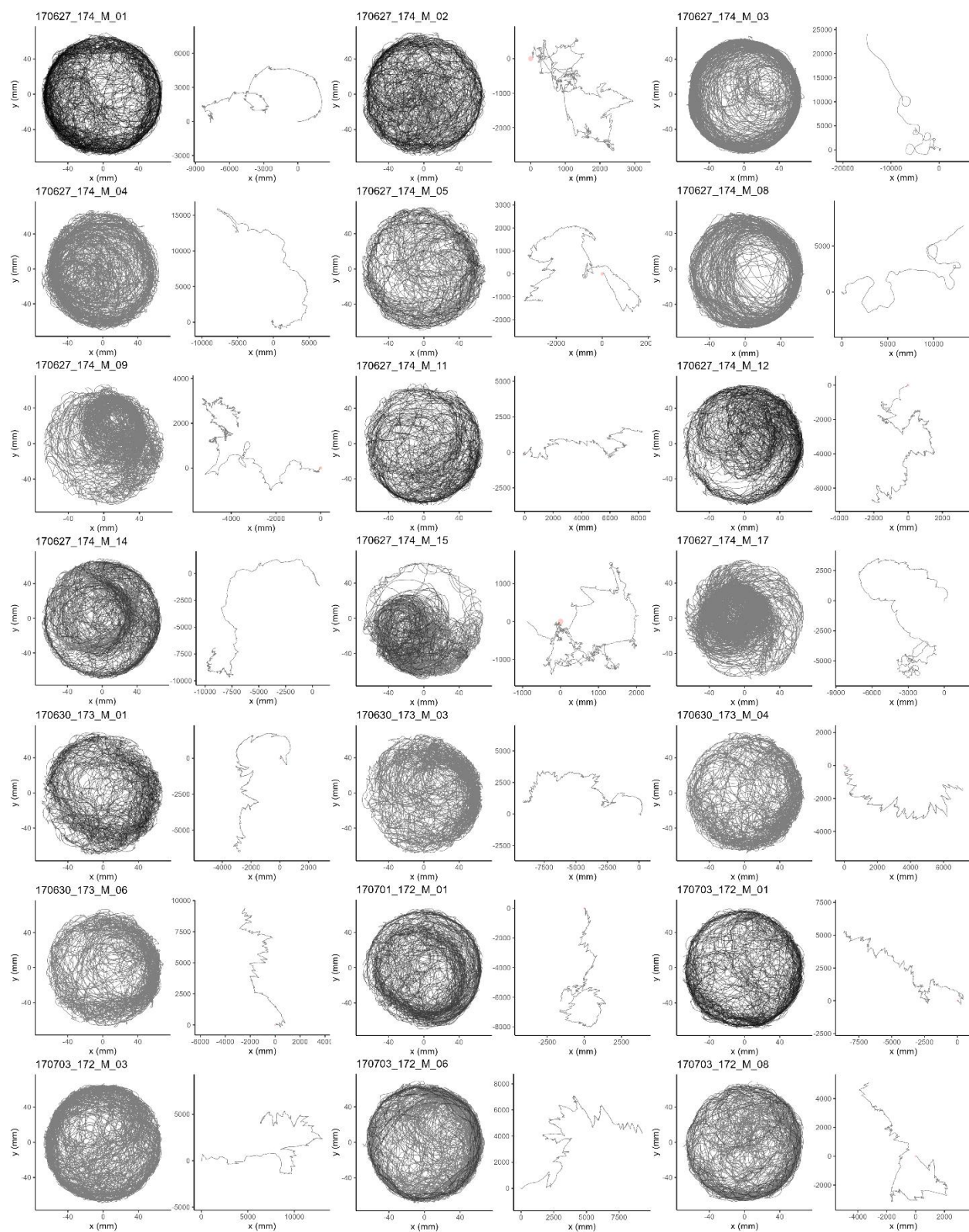
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**Figure S1-S4**

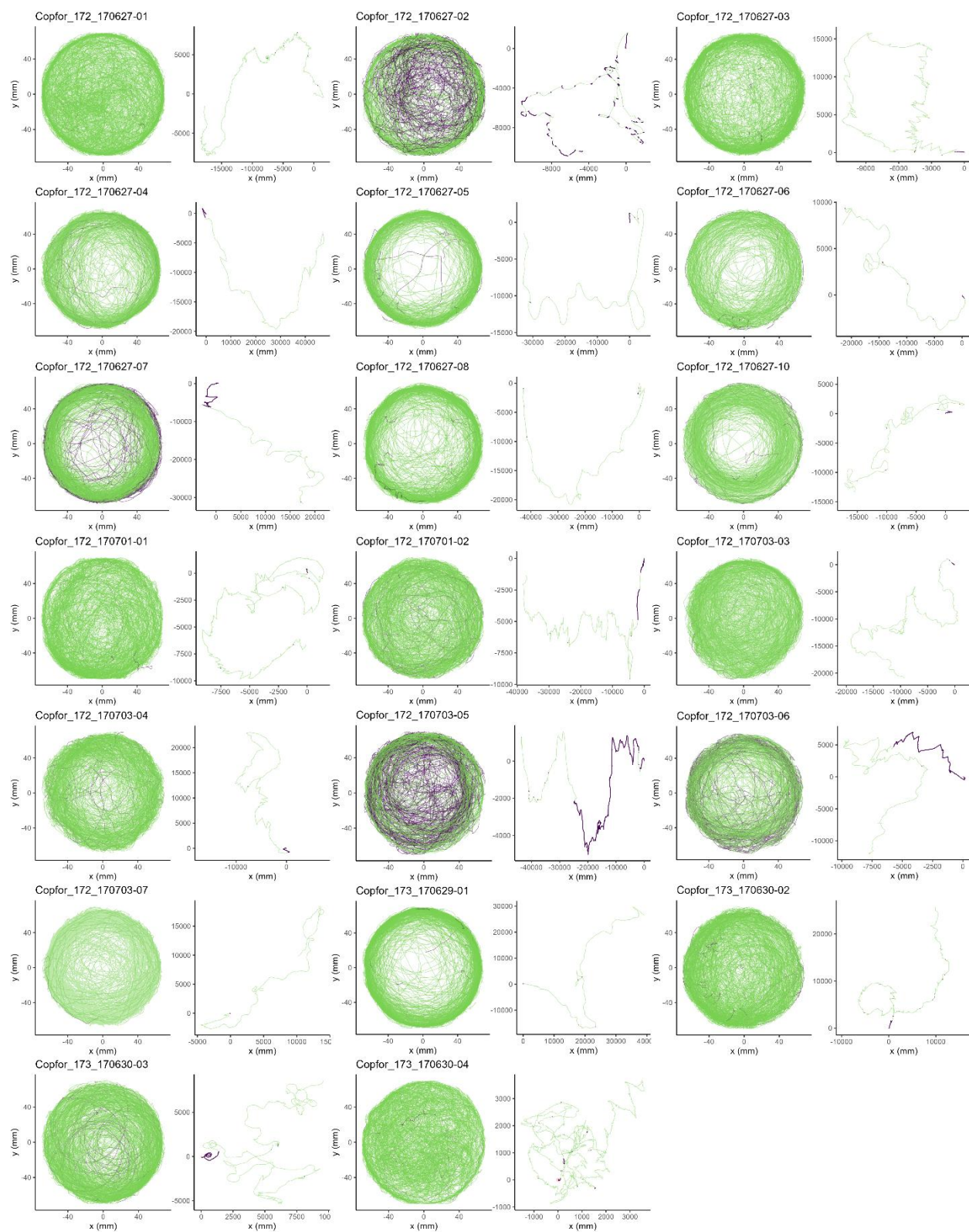


**Figure S1.** Original and unwrapped trajectories of single females.

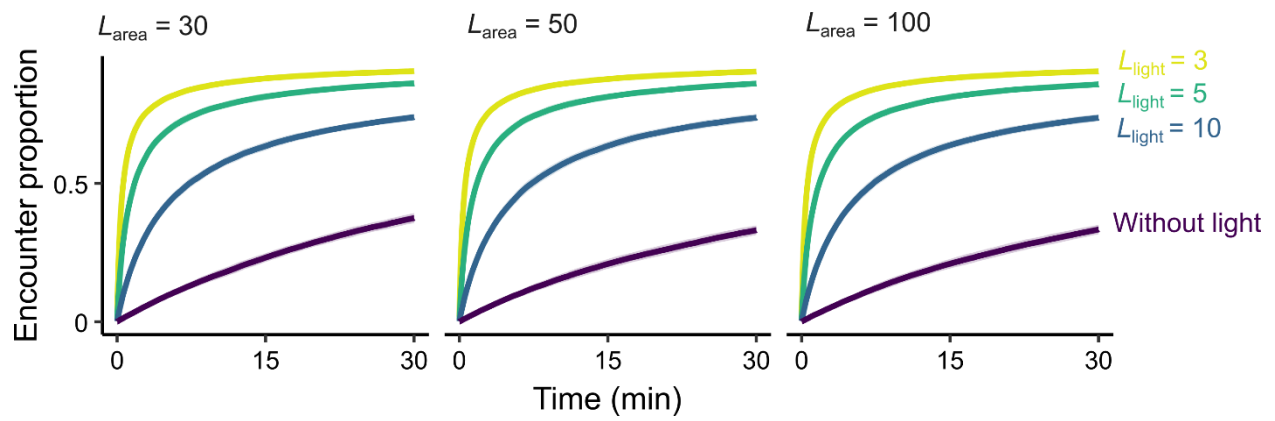


**Figure S2.** Original and unwrapped trajectories of single males.





**Figure S3.** Original and unwrapped trajectories of tandem running pairs. Green is for tandem running, while purple is for separation.



**Figure S4.** The results of the sensitivity analysis of the parameters  $L_{\text{area}}$  and  $L_{\text{light}}$  when  $n = 1,000$ .