## SUPPLEMENTARY DATA

Fig. S1. Ramet and seedling of *W. trilobata*. The ramet of *W. trilobata* was generated at the mother stem node. The seedling was germinated from a seed and it has a primary root.

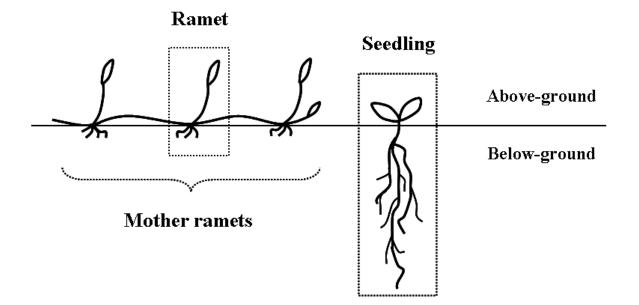


Fig. S2. Sexual reproduction of *W. trilobata*. (A) Flowers in bloom in the field. (B) Flowers on a branch of a greenhouse-grown plant (each stem node could possiblly develop one capitulum). (C) Two types of seed in one capitulum. Inset: Type I seed is plump, fertilized and has germination capacity, whereas type II seed is shrivelled, sterile and can not germinate.



Fig. S3. Layout of experiments eamining the effects of light and/or leaf extracts on seed germination and seedling growth. Exp. 1: light array experiment on seed germination. Petri dishes were wrapped with perforated tinfoil, except for the full-light treatment. For the 1/2, 1/4 and 1/8 light treatments, the total areas of the holes in tinfoil were 1/2, 1/4 and 1/8 of the area of the Petri dish, respectively. Exp. 2: effects of different concentrations of leaf extracts on seed germination under high light and under dark conditions. Exp. 3: effects of different concentrations of leaf extract on seedling growth under high light and under a shade treatment. Exp. 4: seed germination in the field. Concentrations (g mL<sup>-1</sup>) of leaf extracts in Exp. 2 and 3 were 0.05, 0.1 and 0.2 (fresh), and 0.005, 0.025 and 0.05 (dry).

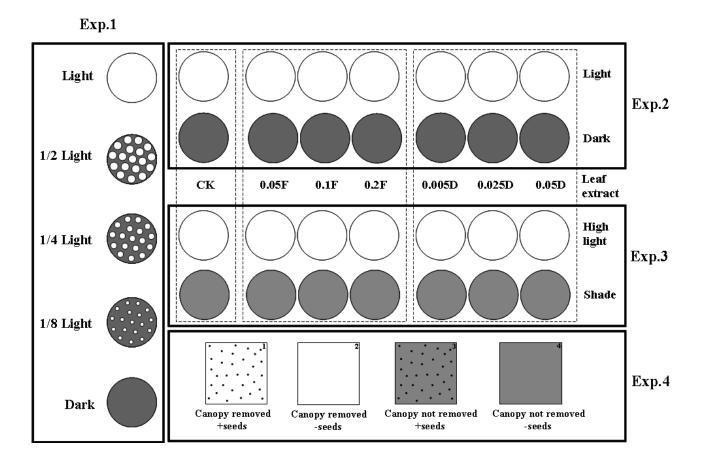


Fig. S4. A seedling emerging in bare ground near to mother ramets. (A) Seedling recruitment (red arrow) of *W. trilobata* in the field. (B) A close-up image of the seedling. (C) The whole seedling after being dug out.

