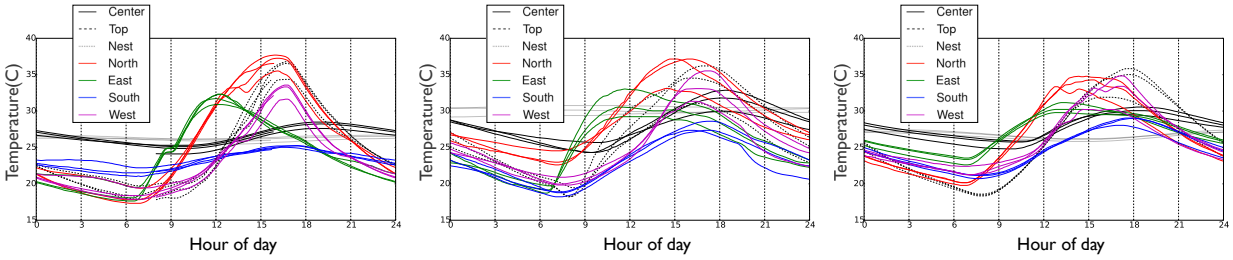

Fig. S1. Additional recordings of daily mount temperature cycles. A total of three mounds were had temperature recordings made for three days. Temper-ature profiles were obtained by implanting iButtons (DS1922L, Maxim) into the mound using a hole saw and closing the openings with wet mud. Eight iButtons were placed at a height of $\sim$ 1 meter, $\sim 5 - 10$cm below the surface at the north, northeast, east, etc. sides of the mound, in the neighborhood of locations where velocity measurements were also made. iButtons were also placed in the nest ($\sim$ 0.5 meters below ground), centre (along the central axis at a height of $\sim$ 1 meter) and top (along the central axis $\sim 15cm$ from the top). From these recordings, it can be seen that mounds follow similar thermal schedules, and each mound's thermal schedule is very well repeated from day to day. A single day from the left-most plot is featured in the main text.

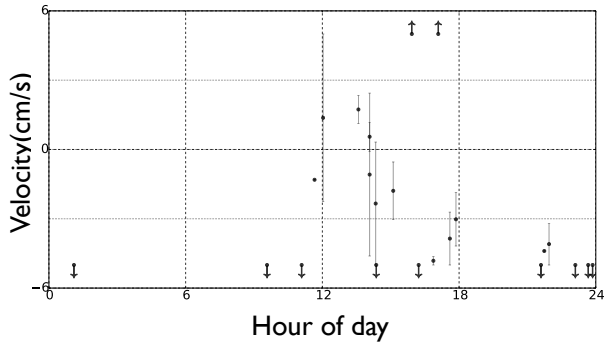

Fig. S2. Additional air velocity measurements. A total of 22 steady-flow air velocity measurements were made in May 2014, showing the same trend of upwards flow during the daytime and downwards flow during the nighttime observed in the more complete 2015 dataset. This corroborates our main result, as well as giving indication that these flow patterns persist from year to year.