Fig. S1. Targeting movements of the hindleg towards the fixed middle leg. (A) Touchdown positions of the stepping hindleg (black crosses) and positions at which the middle leg was fixed (green dots). For comparison, touchdown positions of the stepping hindleg towards the unfixed standing middle leg at the same position (taken from Fig. 2) are shown as smaller gray crosses. Each plot shows data from one of the seven positions of the middle leg. The vertical dotted line marks the position of the middle leg coxa, which is located at zero on the *x*-axis. The dotted semi-circle depicts the calculated average maximum range of fully stretched hindlegs. Results of tests for significant differences (Hotellings T^2-test) between the touchdown positions of the hindleg with fixed middle leg against the alternative with unfixed middle leg are given as *P*-values. (B,C) Scatter plot of the middle leg standing positions against the touchdown positions of the ipsilateral hindleg separated into the components parallel (B) and perpendicular (C) to the body axis. Results of tests for linear correlation (r^2) and significant differences between the groups of data using the Mann–Whitney *U*-test are also given. Plotted are pairs of data that belong to middle leg standing positions that only differ in the considered coordinate. In B, these are positions 2, 5 and 8. In C, these are positions 4, 5 and 6.
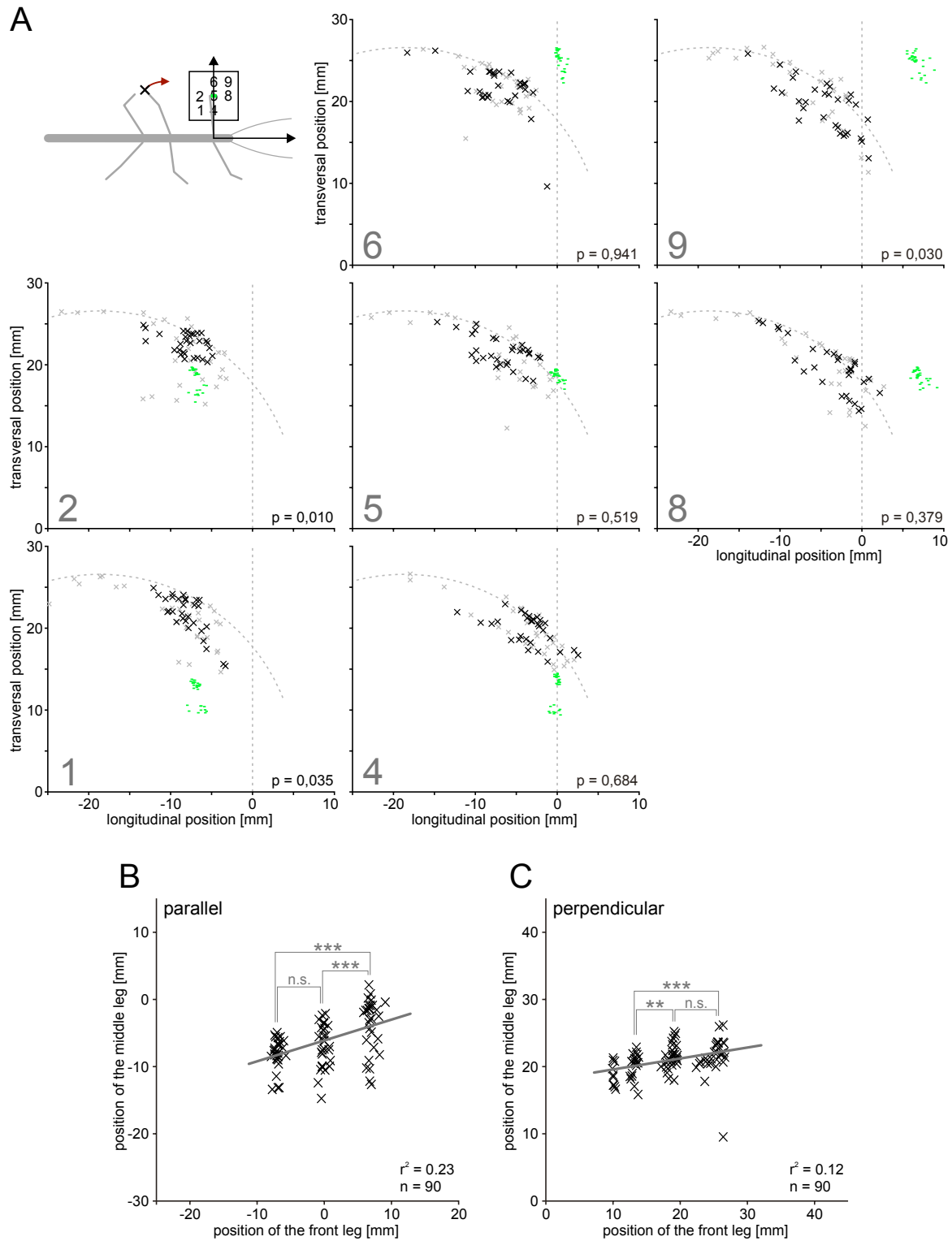
Fig. S2. Targeting movements of the middle leg towards the fixed front leg. (A) Touchdown positions of the stepping middle leg (black crosses) and positions at which the front leg was fixed (green dots). For comparison, touchdown positions of the stepping middle leg towards the unfixed standing front leg at the same position (taken from Fig. 4) are shown as smaller grey crosses. Each plot shows data from one of the seven positions of the front leg. The vertical dotted line marks the position of the front leg coxa, which is located at zero on the *x*-axis. The dotted semi-circle depicts the calculated average maximum range of fully stretched middle legs. Results of tests for significant differences (Hotellings T^2-test) between the touchdown positions of the middle leg with fixed front leg against the alternative with unfixed front leg are given as *P*-values in the figure. (B,C) Scatter plot of the front leg standing positions against the touchdown positions of the ipsilateral middle leg separated into the components parallel (B) and perpendicular (C) to the body axis. Results of tests for linear correlation (r^2) and significant differences between the groups of data using the Mann–Whitney *U*-test are also given. Plotted are pairs of data that belong to front leg standing positions that only differ in the considered coordinate. In B, these are positions 2, 5 and 8. In C, these are positions 4, 5 and 6.