



A



B



C



D

SUPPLEMENTARY MATERIAL 3. Photos of Arizona Grasshopper Sparrows using mesquite (*A*, *C*) and elderberry (*B*) as thermal refugia on hot days, and exhibiting wing-spreading behavior for cooling (*D*). There are at least 2 individuals in panel 3A and at least 3 in panel 3C. Date and time of photos are as follows: *A* – 26 June 2012, 11:12; *B* – 28 June 2012, 13:00; *C* – 28 June 2012, 13:07; and *D* – 26 June 2012, 11:19. Photographs by Janet Ruth.