



**Appendix 4.** Core areas [25% kernel density estimates (upper) and 50% minimum convex polygon (low)] for soft-released first-year-old birds ( $n = 3$ ) that dispersed relatively far from the release site. Outline colors for the release site symbols correspond to the colors of the core area for the birds released. When the birds had multiple core areas, the number of positions included in the core area was indicated. The core area with the star-attached number was used for measuring the dispersal distance.