Satellite tracking of common eider

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This study was initiated to study the migration pathways, the phenology and the habitat use by East Greenland common eiders.

Between 2007 and 2011, 14 common eiders from the assessment area were tracked by means of implanted satellite transmitters. In June 2007, six females and four males were instrumented at the eider colony in Daneborg, and in 2009 further 3 females and 1 male were captured in vicinity of the eider colony in Myggbukta. The eider colony in Daneborg is by far the largest in East Greenland totalling about 2,000 pairs, whereas the colony in Myggbukta is significantly smaller (minimum 120 pairs). Several of the eiders were tracked through more than 2 seasons.

All eiders from both colonies wintered on the north coast of Iceland (Figure 1). Males left Greenland territory about three weeks earlier than females (median day of departure 4 August and 27 August, respectively) and on the autumn migration neither males nor females staged for any length of time outside a 100 km radius of the respective colony sites. The eiders from Daneborg primarily staged scattered along the south and southeast coast of Wollaston Forland including Sandøen, but also at Tyrolerfjord, Grantafjord, Finsch Øer, around Lille Pendulum and off Hold With Hope near Holland Ø (Figure 2). The eiders from Myggbukta staged scattered along the south coast of Hold With Hope, but also further to the south by Scott Keltie Øer and around Kap Mackenzie (Figure 3).

The eiders arrived back in Greenland in the second half of May, the males a little earlier than the females (median day of arrival 13 May and 24 May, respectively). As was the case with the autumn migration, the eiders did not stage underway and flew more or less directly from Iceland to the area in vicinity of the colony sites. The eiders from Daneborg arrived on the south and east coast of Wollaston Forland and at Sandøen, whereas the eiders from Myggbukta primarily arrived on the south coast of Hold With Hope (Figure 2, 3).

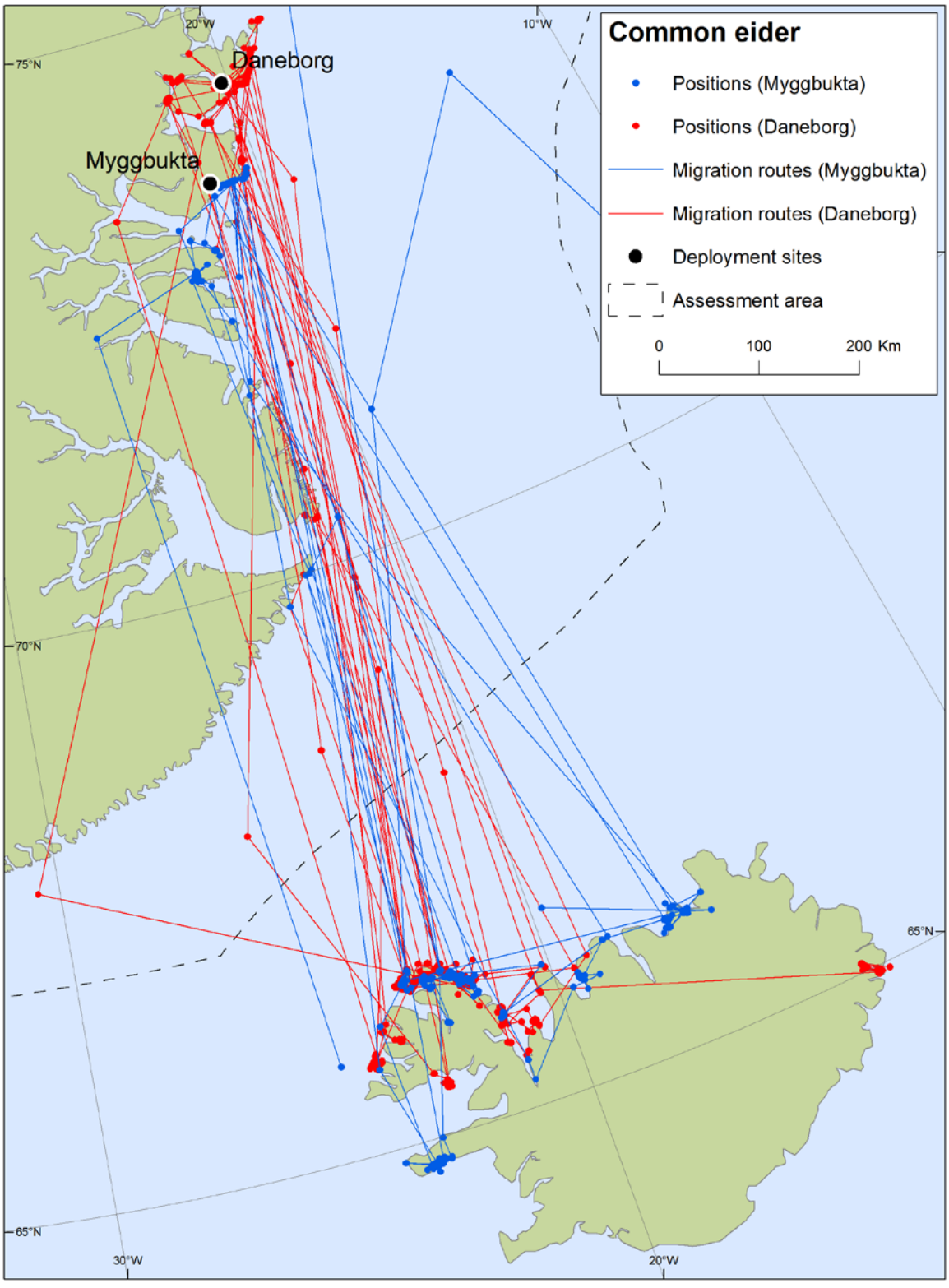

Figure 1. Locations and track lines for 14 common eiders tracked from the Daneborg colony (2007-2009) and from Myggbukta (2009-2011).

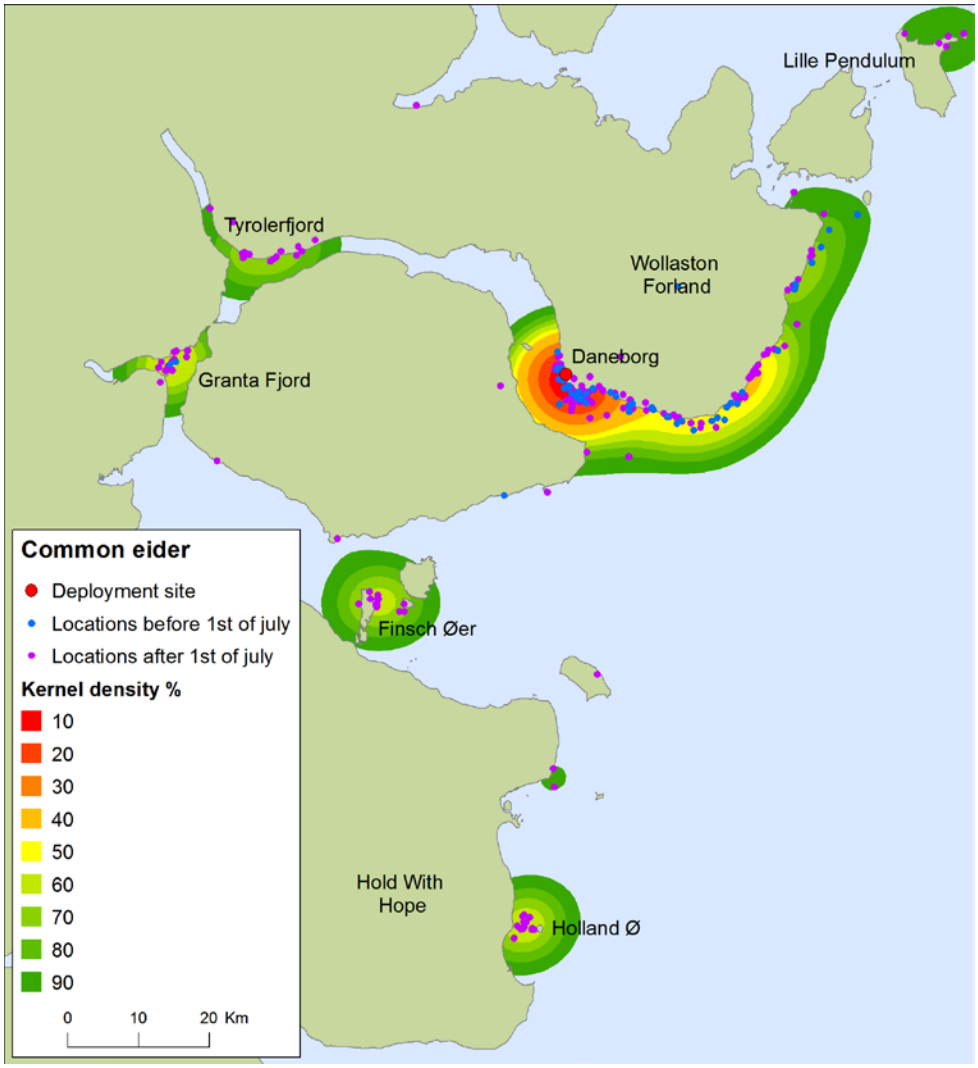

Figure 2. Kernel home range for the common eiders tracked from the Daneborg colony. Locations before 1 July including pre-breeding locations are shown by blue dots, and locations after 1 July including post-breeding locations are shown by purple dots. Locations from the whole tracking period within the area shown on the map are included in the kernel analysis (summers 2007-2009).The Kernel home range contours represent an estimation the areas in which a certain percentage of the locations will be found. Thus 95 % of the locations are found within the 95 % probability contour.

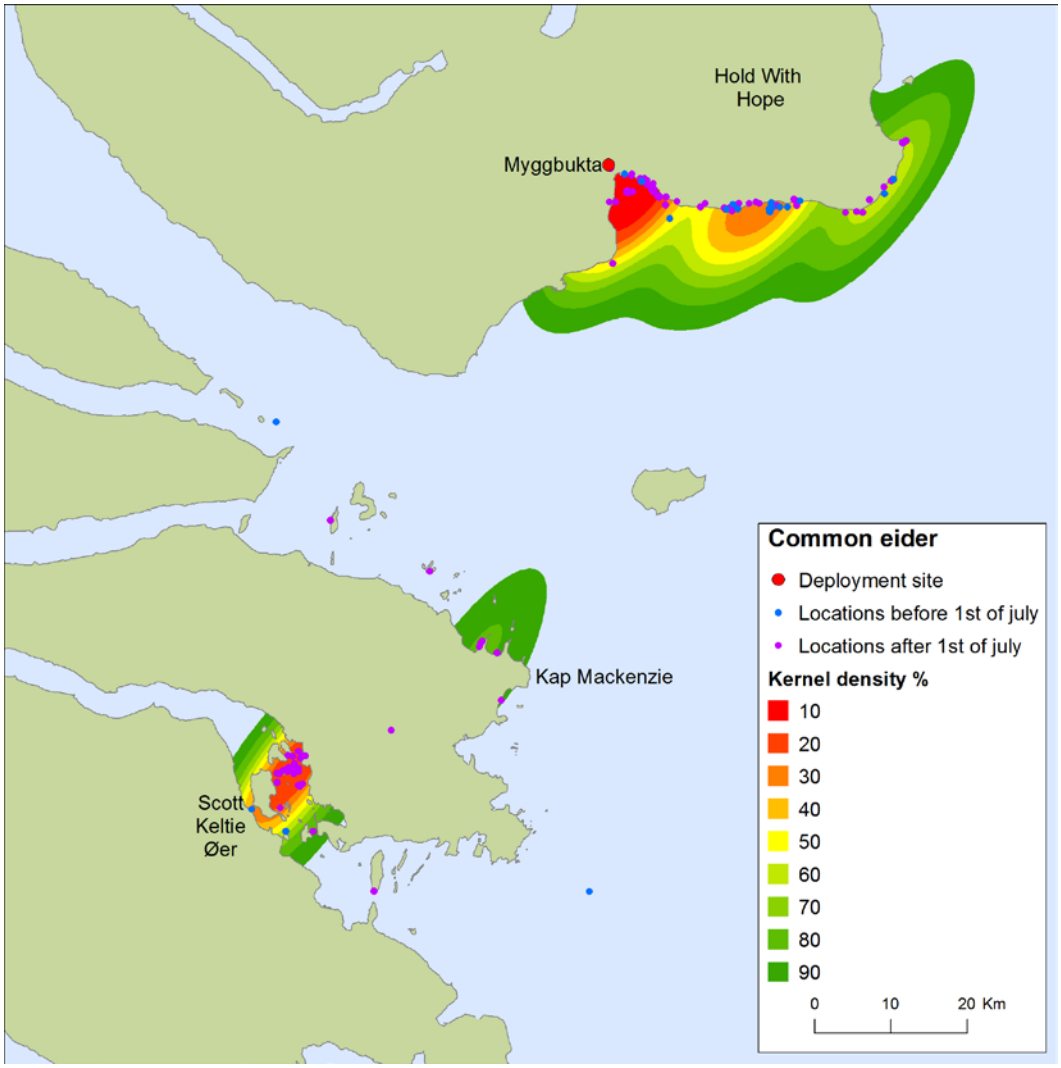

Figure 3. Kernel home range for the common eiders tracked from the Myggbukta colony. Locations before 1 July including pre-breeding locations are shown by blue dots, and locations after 1 July including post-breeding locations are shown by purple dots. Locations from the whole tracking period within the area shown on the map are included in the Kernel analysis (summers 2009-2011).