

Foraging movements of Caspian terns *Hydroprogne caspia* breeding in a coastal area of Sweden

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The Caspian tern (*Hydroprogne caspia*) is the largest tern species, which has a wide breeding distribution throughout the world. In Sweden, the largest breeding colony of this species is the small island of Norra Stenarna, at Fågelsundet in the Baltic Sea (N 60° 37' 53", E 17° 55' 46") with about 100 breeding pairs each year for the last several years. The investigation of the foraging habitat of these large populations is important not only for improved understanding of their breeding biology but also for conservation of the species. To obtain movement paths during foraging trips and to collect data on foraging sites throughout the season, we deployed GPS data loggers (<7.5 g in mass, UvA-BiTS) with Teflon ribbon harness on 14 adult Caspian terns breeding at Norra Stenarna. The loggers recorded time-series positional data at 2.5 min or 5 min sampling intervals. Foraging periods were estimated based on ground speeds calculated from consecutive positional fixes. Histograms of the speeds were bimodal; one peak value near zero, and the other around 38 to 42 km h⁻¹. The higher values were considered as average flight speeds, while the lower ones corresponded with resting or foraging events. Then, foraging areas were extracted from the spatial distribution of positional data during foraging periods using a clustering method, DBSCAN (Density-Based Spatial Clustering of Applications with Noise). We will discuss distribution and changes in the distribution of estimated foraging areas in relation to breeding activities as well as individual differences in foraging habitat selection.