

SPATIAL AND TEMPORAL ASPECTS OF FRANKLIN'S GULL FLOCKS

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ABSTRACT.—Franklin's Gulls (*Larus pipixcan*) arriving and departing from a breeding colony were clumped in space and time. Daily changes in directional use and the number of directions used declined as the breeding season advanced. Temporal clumping was greatest in the evening. Arrivals were often more clumped and had shorter flock durations than departures. Most flights showed more than one pattern of flocking. Interbird distances were greatest for morning departures and afternoon arrivals. An increased temporal clumping of birds away from the colony, linear flight paths of departing individuals, and high call frequencies of birds in flight, suggests that social facilitation superimposed on random departure times is one causal explanation of flock formation. Variation in spatial and temporal clumping patterns indicates that the extent to which arrivals and departures are socially facilitated is associated with the time of day and flock destination.

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