

Migrating Broad-billed Sandpipers achieve high fuelling rates by taking a multi-course meal

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In spring, large numbers of migrating Broad-billed Sandpipers make a stop-over in the Sivash, a shallow lagoon system in the Crimea, Ukraine, between the Black Sea and the Sea of Azov. Observed fuelling rates are high and, in just a few weeks, the birds can build up sufficient departure mass to reach their breeding grounds in a single non-stop flight (Verkuil *et al.* 2006). For feeding, Broad-billed Sandpipers prefer the brackish lagoons with a diverse benthic prey community. They ignore the hypersaline lagoons which are teeming with brine shrimp (*Artemia* sp.), a common prey for migrating Dunlins and Curlew Sandpipers in this area (Verkuil *et al.* 2003). In this paper we report on diet choice in relation to gut processing efficiency of different possible prey species for Broad-billed Sandpipers. We ask two questions: “Why do Broad-billed Sandpipers avoid feeding on brine shrimp in the hypersaline lagoons?” and “Do they specialize on one particular prey species in the brackish lagoons?”. Digestion efficiency of birds fed with brine shrimp was lower than for birds fed with the polychaete *Nereis diversicolor* or the crustacean *Gammarus insensibilis*. In the brackish lagoons, prey items seen ingested were both polychaetes (*Nereis diversicolor*) and larger crustaceans. Field observations on defecation intervals compared with identical observations on captive individuals suggest that both polychaetes and crustaceans were included in the diet. Although studies from other staging and wintering sites report that Broad-billed Sandpiper usually eat polychaetes, we suggest that they optimize their energy intake by eating a multi-course meal.