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Abstract Volume

Mono Lake whereas only 10% were on Great Salt Lake. Abundance patterns on these lakes have changed in recent years, suggesting that some grebes may have switched affiliations from Mono Lake to Great Salt Lake. To assess this possibility, in 2017 we captured grebes breeding on the same ponds as in 1996, implanted them with the same type of transmitter, and attached light-level geolocators to their leg bands. Early fall telemetry surveys indicated that 15% of the tagged birds were on Mono Lake whereas 44% were on Great Salt Lake (opposite from 1996). However, only 25% of these tagged birds were detected during late fall surveys on the lakes, i.e., prior to them migrating to southern wintering areas. The grebes accumulate a thick layer of body fat in late fall and that fat is suspected to have reduced the signal strength of the transmitters. To circumvent this problem, backpack transmitters with external antennae will be deployed in 2018. Data from these new tags and the geolocators will be analysed to determine the final proportional distribution on Mono Lake versus Great Salt Lake and to generate entirely new information related to migration patterns and over-wintering areas.

P06.002

North before south: some Common Terns from New Jersey stage at Cape Cod before fall migration

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Although most conservation effort and research on terns has focused on breeding colonies, there is increasing awareness of the importance of staging, stopover, and wintering areas. Cape Cod (Massachusetts, USA) is well known as a critically important staging area for the endangered Northwest Atlantic population of Roseate Terns (*Sterna dougallii*). Large flocks of Common Terns (*S. hirundo*) are also seen at Cape Cod prior to fall migration. Common Terns in the declining Barnegat Bay population (New Jersey, USA) were marked with plastic color or field-readable bands, allowing identification in the field (adults since 2012, chicks since 2015). During re-sighting efforts focused on Roseate Terns from 2012 through 2017, at least 18 individual Common Terns from Barnegat Bay were identified staging at Cape Cod. That birds would move >420 km northeast before beginning their migration to wintering grounds in South America indicates the importance of Cape Cod for post-breeding and post-fledging Common Terns. Two birds were identified south of Barnegat Bay during the presumed staging period, suggesting that not all individuals follow the same route. We predicted that adults with surviving young would be more likely to move to Cape Cod before travelling south, to take advantage of high-quality foraging grounds, but found no evidence to support such a pattern. Current or planned offshore wind farms between Barnegat Bay and Cape Cod may put migrating terns at risk.

P06.003

Changes in goose spring migration – taught efficiency vs. variability for adaptation

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Suitable forage and flight conditions during spring migration are crucial for the survival and successful reproduction of most avian migrants. Recent levels of climate and habitat change can alter these conditions, especially for Arctic breeders that have so far been highly time constrained. For socially migrating geese, necessary levels of adaptation likely stand in contrast to the transmission of traditional migration schedules and routes, especially from parents to young. We analysed high resolution GPS tracks of >200 European Greater White-fronted Geese (*Anser a. albifrons*) during 2006-2010 and 2014-2018, including 20 completely tracked families. Spring migration routes, stopovers and timing were compared between years and individuals, and between juveniles migrating with or without their parents. Testing for social learning, we explored high resolution flight formation patterns and energy expenditure of migrating families. We show that in the later years, migration routes have shifted and migration timing was not as clearly related to the green wave anymore. The 30 juvenile geese that migrated with their parents followed the green wave more closely than the 15 juveniles that had separated during the winter. V-flight formations of tracked families revealed that juveniles always flew behind their parents in positions with optimal visual contact, supporting social learning. We conclude that spring migration of Greater White-fronted Geese seems to react to ongoing climate and habitat changes. Juvenile geese that migrate their first year without the parents likely miss benefits of family social flight and learning, but introduce variability that will favor adaptation to environmental changes

P06.004

Are Little Terns Sternula albifrons breeding in Okinawa and East Japan different population?

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Maintenance of breeding sites, wintering sites, stopover sites are necessary for the protection of migratory birds. We know