



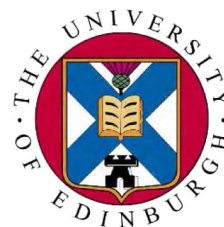
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Parakeet auklet (*Aethia psittacula*) – is the monotypic species actually monotypic?

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The parakeet auklet is a small planktivorous alcid (Alcidae, Charadriiformes) that breeds on islands and coastlines of the North Pacific. Until now this species was supposed to be monotypic (Gaston & Jones, 1998), but molecular analysis has not yet been conducted. We analyzed mitochondrial control region fragment (427 bp) to estimate the differentiation between birds from Asia (Talan I., Kuril Is., north-eastern waters of Kamchatka, Commander Is.) and America (Aleutian Is.), totally N=59. We found a significant difference between auklets from Aleutian Is. and from all other colonies excluding the geographically nearest Commander Is. ($F_{ST}(\text{Aleutian Is.}-\text{Talan I.})=0.109$, $F_{ST}(\text{Aleutian Is.}-\text{Kuril Is.})=0.231$, $F_{ST}(\text{Aleutian Is.}-\text{Kamchatka})=0.168$, $P<0.017$; $F_{ST}(\text{Aleutian Is.}-\text{Commander Is.})=0.051$ $P>0.017$ after BY-correction). However, birds from Commander Is. did not differ from all other birds ($P>0.017$ in all pairwise comparisons). It is considered that mtDNA reflects historical differentiation, so differences found between Asian and American colonies could be the result of the expansion from two different refugia – Asian and American, during the last glacial maximum (approximately 22000-17000 years ago), after which Asian auklets colonized colonies of the Sea of Okhotsk and Commander Is., while American ones – Aleutian Is. Perhaps, now gene exchange exists between Aleutian and Commander Is. Supported by RFBR №14-04-01138.

Intraspecific genetic differentiation in the ancient murrelet (*Synthliboramphus antiquus*)

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The ancient murrelet is a small alcid (Alcidae, Charadriiformes) that breeds in the North Pacific. Based on slight morphometric differences, L.S. Stepanyan (1972) proposed separating murrelets from Commander Is. into a unique subspecies. Pearce et al. (2002) analyzed mtDNA variability and found no differentiation between birds from Asian and American colonies, but without taking Commander birds into account. We analyzed mitochondrial control region fragment (431 bp) and 4 microsatellite loci to reexamine intraspecific differentiation and to estimate the position of Commander ancient murrelets among birds from other parts of the range. We analyzed samples from Asia (Talan I., Kuril Is., north-eastern waters of Kamchatka), Commander Is. and America (Aleutian Is.), totally N=99. We found no significant intraspecific differentiation in mtDNA analysis ($P>0.017$ in all pairwise comparisons). However, the analysis of pairwise genetic differentiation (R_{ST}) in microsatellite DNA and the Bayesian analysis in STRUCTURE revealed two genetic clusters: one consisting of Commander ancient murrelets, the other - of Talan and Kuril birds ($R_{ST}=0.217$ and $R_{ST}=0.111$, respectively, $P<0.017$). Birds from geographically nearest Aleutian Is. and Kamchatka partly mixed with Commander murrelets. Despite this, we did not find strong evidence in favour of subspecies status for Commander birds. Supported by RFBR №14-04-01138.