Strigidae: split Northern Fish Owl *Ketupa doerriesi* from Blakiston's Fish Owl *Ketupa blakistoni:* Taxonomic revisions on the basis of data presented in Movin et al. 2022 and Omote et al. 2018.

Manuel Schweizer

This proposal is based on per-proposal initially drafted by James Eaton and amended based on comments of various members of the Palearctic RAG.
All eight members of the Palearctic RAG voted on this case with all supporting the proposed split.

AviList v2025 taxonomy

English name	Sciname and authority	range
Blakiston's Fish Owl	***Ketupa blakistoni***	
	Ketupa blakistoni doerriesi (Seebohm, H, 1895)	far eastern Siberia and northeastern China
	Ketupa blakistoni blakistoni (Seebohm, H, 1884)	Sakhalin, southern Kuril Islands, and northern Japan (Hokkaido)

Birds of the World, matching AviList taxonomy: https://birdsoftheworld.org/bow/species/blfowl1/cur/introduction

Proposed taxonomic revision for AviList v2026

- **Blakiston's Fish Owl* (*K. blakistoni*)**
- **Northern Fish Owl* (*K. doerriesi*)**

English name*	Sciname and authority	range
Blakiston's Fish Owl	***Ketupa blakistoni*** (Seebohm, H, 1884)	Sakhalin, southern Kuril Islands, and northern Japan (Hokkaido)
Northern Fish Owl	***Ketupa doerriesi*** (Seebohm, H, 1895)	far eastern Siberia and northeastern China

Reason for taxonomic revision, follows Movin et al. 2022 and Omote et al. 2018.

Vocalisations
Stark differences in vocalisations (fig 1 & 2) - with playback experiments undertaken in the field on both taxa (JAE – to avoid disturbance it was carried out on just a single pair of *K. b. blakistoni* and single pair of *K. b. doerriesi*), with both taxa highly responsive to calls of the same taxa, contrasting with negative responses using playback of the other taxa.

Movin et al. (2022) obtained 192 duets from 22 pairs of Blakiston's Fish Owl: 15 pairs of *B. b. blakistoni* from the Japanese island of Hokkaido and the Russian Kuril island of Kunashir, and seven pairs of *B. b. doerriesi* from Primorye on the Russian mainland. This is a sizeable dataset for such a large, retiring, and rare owl. They conducted bioacoustic examinations of 14 vocal parameters using principal component analysis and the Isler criterion to quantitatively test species boundaries within the *B. blakistoni* complex. They found that the insular populations on Hokkaido and Kunashir emerged as vocally similar to each other but markedly different from the continental populations of *B. blakistoni*, corresponding closely with presently accepted subspecies limits. Bioacoustic differences in the duets of the insular and continental groups are greater than the pairwise comparisons of territorial vocalisations between other sympatric owl species. Based on the reproductive importance of vocal duets in owl biology, they proposed the taxonomic elevation of the continental subspecies to species level as Northern Fish Owl *B. doerriesi*.

Blakiston's Fish Owl: https://macaulaylibrary.org/asset/182695611
Northern Fish Owl: https://xeno-canto.org/692537

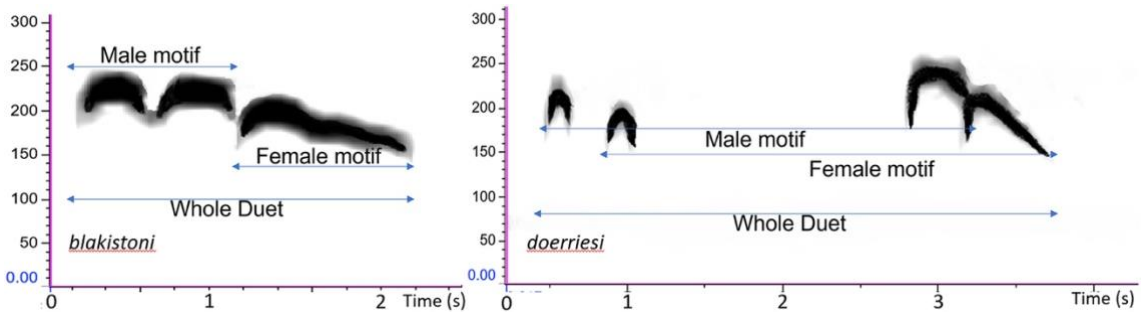

Figure 1: spectrogram (from Movin et al. 2022)

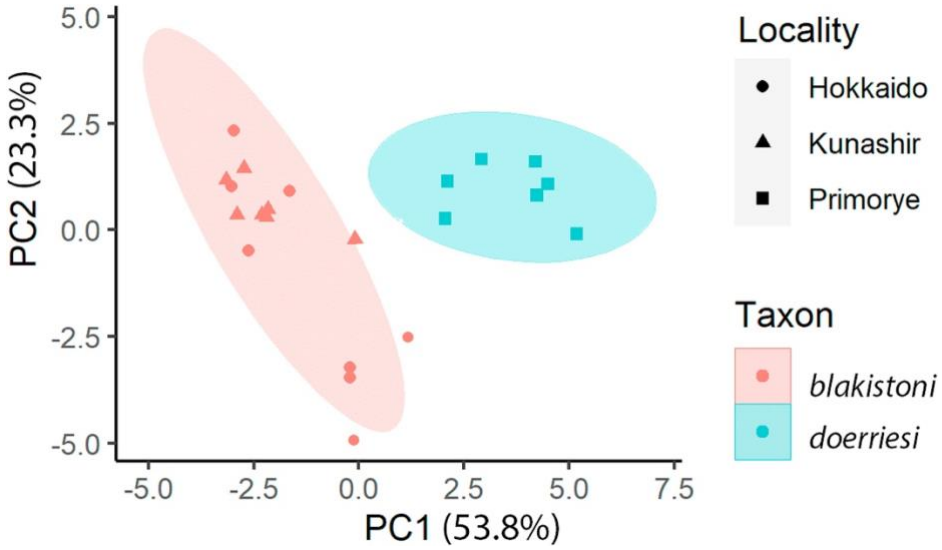

Figure 2: PCA of vocal parameters (from Movin et al. 2022), see link for in-depth discussion on the results.

Genetics

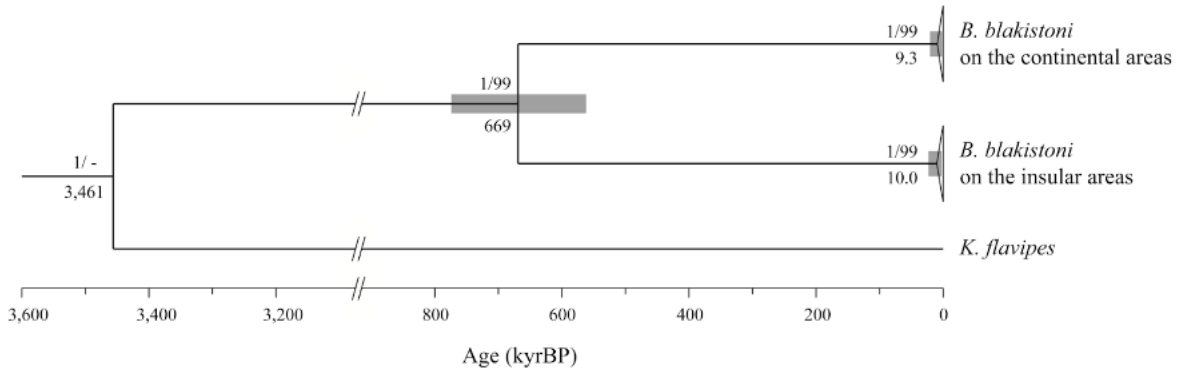

Figure 3. The molecular phylogeny based on the whole mitochondrial genome sequences of *Bubo blakistoni* and *K. flavipes* as an outgroup. Numbers above the tree branches indicate the Bayesian posterior probabilities / ML bootstrap values. Numbers below branches show the estimated divergence times, and bars show mean 95% highest posterior density intervals; kyrBP = kilo yr before present.

Figure 3: phylogenetic tree (from Omote et al. 2018)

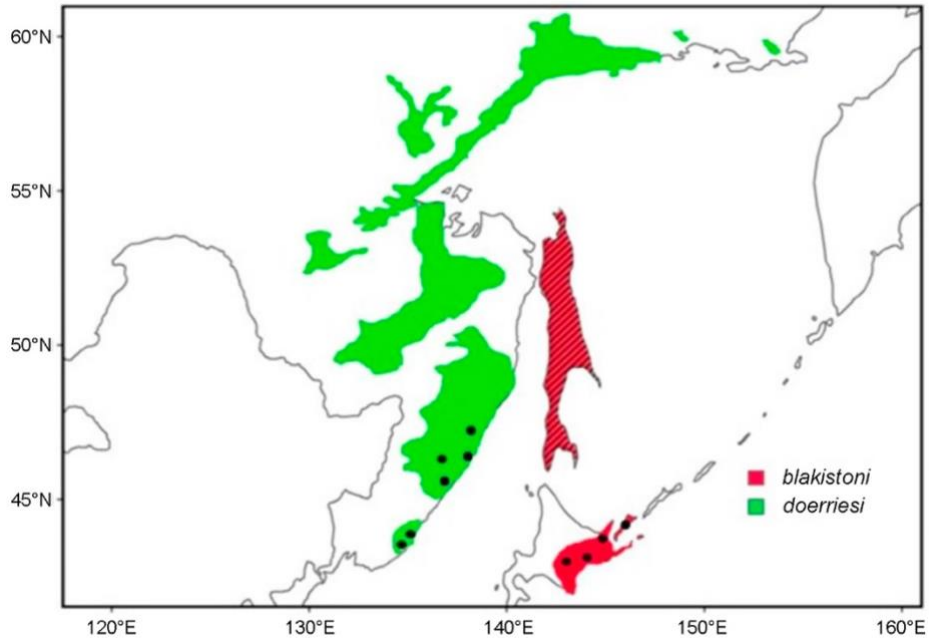

Figure 4: current distribution (from Movin et al. 2022). Hatched area represents historic distribution.

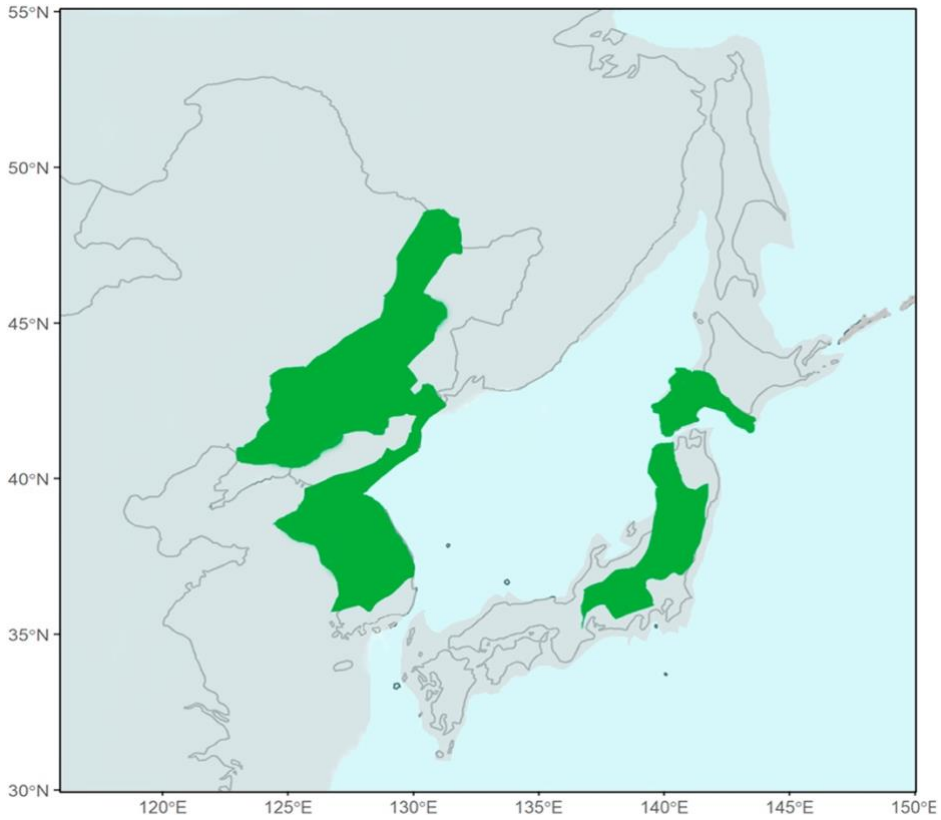

Figure 5: Map of East Asia during the Last Glacial Maximum (LGM) at ~18 kyr. Grey areas indicate land exposed during this period. Potential broadleaf forest refugia for *B. blakistoni* and *B. doerriesi* are shown in green. Adapted from **Harrison et al. (2001), Iwase et al. (2012), Binney et al. (2017), Chung et al. (2017),** and **Wang et al. (2017). (from Movin et al. 2022)**

Morphology

Minor plumage differences (fig 6) + *doerriesi* larger in size.

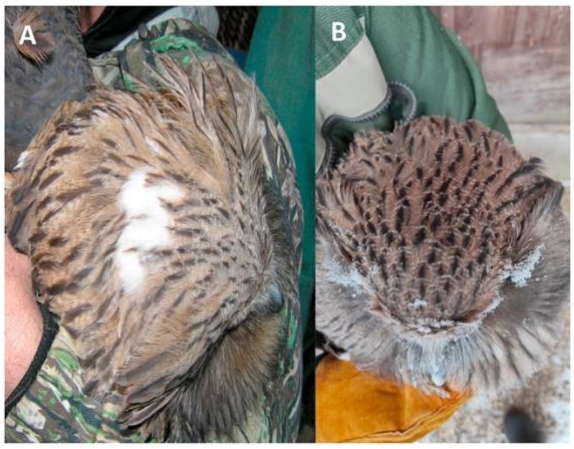

Figure 6: minor plumage differences, A (*doerriesi*) show-casing large white nape patch lacking in B (*blakistoni*).

Yardstick

The Isler criterion is known to be particularly conservative and just small numbers of diagnosable differences have been found in the territorial calls of even sympatric owl species. For instance, only two completely diagnosable parameters were identified between the territorial vocalisations of the sympatric Barking Owl (*Ninox connivens*) and Southern Boobook (*Ninox boobook*) (Gwee et al., 2017), half the number we have diagnosed between the two populations of fish owl. Other studies have elevated bird populations to species based on fewer completely diagnosable parameters (Gwee et al., 2017; Prawiradilaga et al., 2018; Isler et al., 2020) than what they have identified here.

Indeed, a number of owl species presently accepted to be separate species have far more similar territorial vocalisations than our pair of fish owls. For instance, the Cloud Forest Screech Owl (*Megasops marshalli*) and the Cinnamon Screech Owl (*Megascops petersoni*) both share a highly similar territorial song comprising of a series of monotonic hoots but are still regarded as two species that occur in geographic proximity (Krabbe, 2017).

On the basis of these extreme vocal differences, when placed into the greater context of territorial vocalisations in owls and coupled with documented differences in plumage, the most pronounced being a white patch on the back of *B. b. doerriesi* that *B. b. blakistoni* lacks (Fig. 6) and the presence of 'a nearly white tail when fully adult' for *B. b. doerriesi* (Seebohm, 1895), treating these two Fish Owls as species level taxa seem the best integrative solution despite only comparatively low divergence in mtDNA.

Some comments on Common (English) names

While the questions about English names will be a matter for the future committee specifically dealing with such, it is worth making a few notes here. The names Blakiston's Fish Owl for *K. blakistoni* and Northern Fish Owl for *K. doerriesi* were proposed by Movin et al. (2022), following consultation with those that study the species and out of respect to them and their work. These have been discussed by members of RAG Palearctic, as they are seen as suboptimal by several members. The main objections are:

- In the split, it may be desirable not to leave the parent name (for *K. blakistoni* s.l.) with one of the new sister species (*K. blakistoni* s.s.). This presents an opportunity to award *K. blakistoni* s.s. a new name, potentially carrying more information about the species. Potential names mentioned were Hokkaido Fish Owl, which however does not cover all of the present species distribution and little of the historic distribution, and Ainu Fish Owl. The latter takes the name of the indigenous Ainu people, whose current and historic distribution covers the entirety of the present species distribution and much of its historic distribution on Sakhalin.

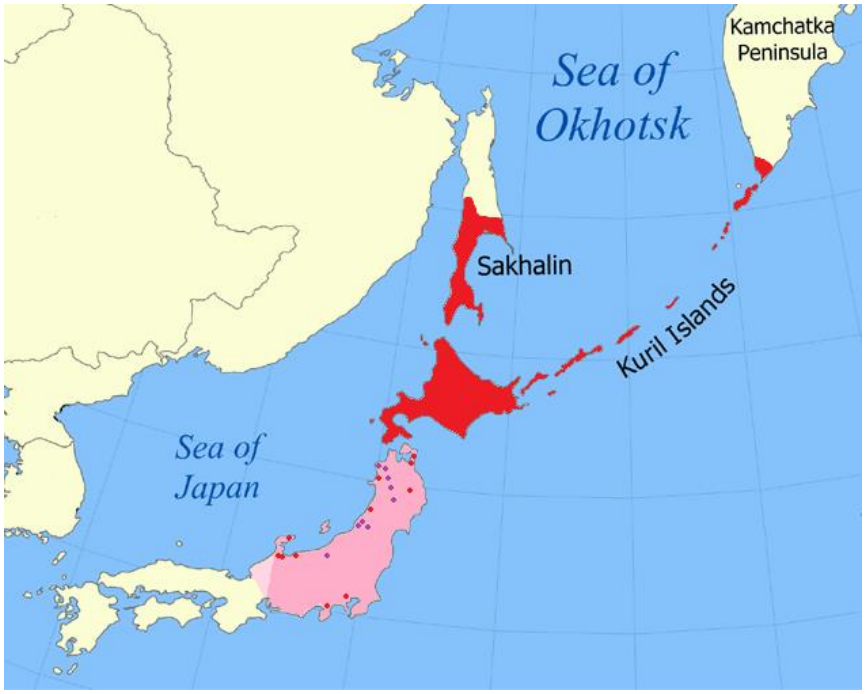

Figure 7. "Historically attested range of Ainu (red) and suspected former range (pink) based on toponymic evidence (red dots), Matagi villages (purple), and Japanese isoglosses (western limit) with modern-day borders shown" (https://en.wikipedia.org/wiki/Ainu_people)

- Northern Fish Owl was proposed by the Russian researchers that have studied the species for decades (Sergei Surmach in litt to Movin et al). Though its distribution is not hugely more northerly than its sister species, especially not when accounting for the historic population of *K. blakistoni* s.s. on Sakhalin. Potential alternative names mentioned were Primoryie Fish Owl, Khabarovsk Fish Owl, Ussuri Fisch Owl, Amur Fish, Sikhote-Alin Fish Owl, neither of which reflect the full range, and all of which had been discussed by Movin et al. (2022). Another potentially more descriptive and relevant formal new name could be **White-naped Fish Owl**, illustrating a unique trait among the fish owls. However, if the Ainus were honoured for *K. blakistoni*, why not another indigenous group such as the Udege for *K. dorriesi*?

We would like to pint out that any proposals for New English should be discussed with the various Russian and Japanese stakeholders due to it being such an iconic, well-known species in both Japan and Russia.

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