



Night-Fishing Primorye's Wild Rivers: A Portrait of the Blakiston's Fish Owl Jonathan Slaght

It is dusk in Primorye, and it is winter. The Kema Valley is frozen and quiet; the only sound comes from the river where a few short stretches of water have resisted freezing, and the shallow streams gurgle gently over the smooth rock and pebble of the Kema River. Then, a faint noise, like wind through reeds, and the silhouette of something big landing on the river's edge. The owl's form is prominent in the fading light against the contrasting backdrop of snow and ice. It is massive, and as it looks at the water's surface for prey, its giant ear tufts are erect: floppy, ragged, and almost comical. The owl hunches over and lumbers slowly along the river side, leaving a characteristic trail of tracks. Each print in the snow resembles the letter 'K'; its feet have specialized toes adept at gripping squirming fish, more like those of an osprey (*Pandion haliaetus*) than of a typical owl. It pauses, then lunges with a splash, and stands in the shallow water with a death grip on a Masu salmon (*Oncorhynchus masou*) twitching impotently in its talons. Then, as quietly and as suddenly as it arrived, it is gone, leaving only the tracks on the bank as evidence that she was ever there (Photo 4).

This was a rare look at the hunting behavior of the enigmatic Blakiston's Fish Owl (*Ketupa blakistoni*, Photo 1). These massive birds, which can weigh more than 4.5 kilograms, are the largest owls in the world, and the only owl species of temperate forests listed as Endangered by the IUCN. Fish owls are supremely secretive, difficult to see, and have a natural history that seems improbable: they live year-round in a corner of the



Photo 1. Blakiston Fish Owl near Olga River, Primorye (March 2006).
Photo: J. Slaght.

world where most rivers freeze in winter. This creates an impenetrable barrier of ice between the owls and their primary prey. Therefore, in order to survive in winter, they appear to defend small territories in areas where a warm-water spring meets a main river channel, and the water remains unfrozen there in all but the most extreme winters. Most of the fish that winter in these rivers are small but plentiful, and appear to sustain fish owls through this leanest season of their year.

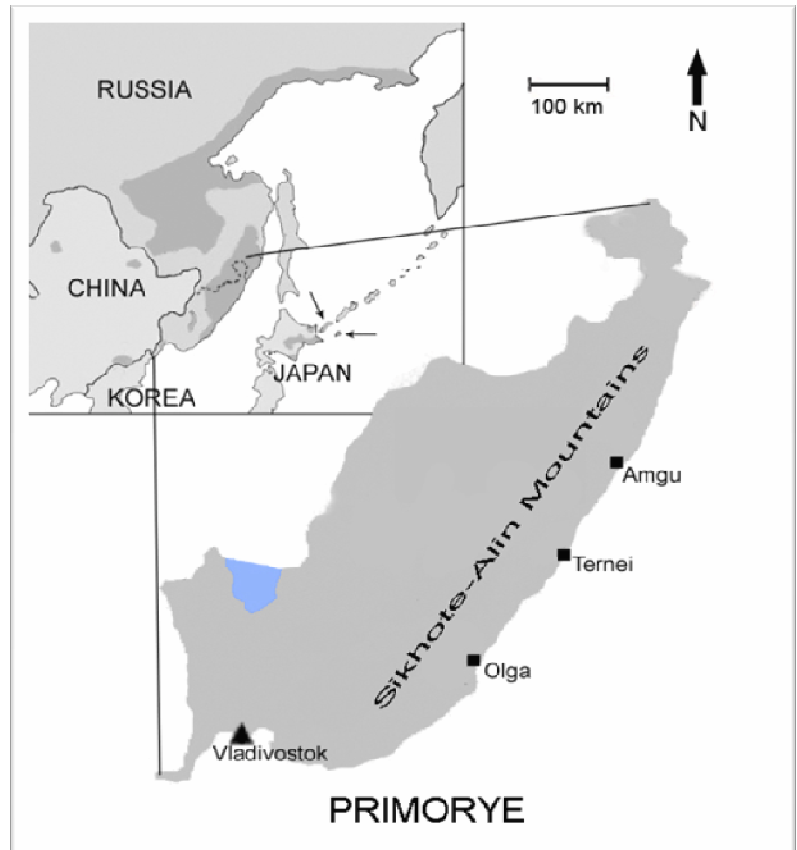
Since 2005, I have collaborated with Sergei Surmach, an ornithologist at the Russian Academy of Sciences Far Eastern Branch in Vladivostok, to study Blakiston's Fish Owls in Primorye. Surmach has studied this species since the early 1990s, and arguably knows more about fish owls than anyone else in Russia; I am lucky to be work-



ing with him. Before Surmach and his team of field assistants began surveying for fish owls on the eastern slope of the Sikhote-Alin mountains, in remote northern Primorye (Map 1), it was assumed that most fish owls in the region lived in low densities along the large, slow rivers draining off the western slope of the Sikhote-Alin ridge, such as the Bikin, the Iman, and the Khor. In fact, Surmach has shown that fish owl population densities are likely higher in coastal northern Primorye than any other known location in their range.

Just how many fish owls are there in the world? The truth is, no one really knows. There are two recognized subspecies, the **island subspecies** (*K. b. blakistoni*) and the **mainland subspecies** (*K. b. doerriesi*). The island subspecies, which is well-studied and inhabits Hokkaido Island (Japan) and southern Kurile Islands (Russia), is thought to have no more than 60 breeding pairs. On the mainland, however, a large portion of potential fish owl habitat has not been surveyed at all. Surmach, his team, and other Russian biologists have found fish owls as far north as Khabarovsk Krai and as far west as Amur Oblast. Eugene Potapov, a Steller's Sea Eagle (*Haliaeetus pelagicus*) biologist, has shown me several locations on a map where he has personally heard territorial fish owl calls in Magadan. The vast area in between, about 1,000 kilometers of the Sea of Okhotsk coast, has never been surveyed for fish owls. By extrapolating Surmach's population survey data from Primorye to all potential ranges, he estimates that there may be 800 **breeding pairs** on the mainland. Taking into account unpaired adults and juveniles, the global population may be as high as 5,000 individuals.

Given their size, Blakiston's Fish Owls have



Map 1. Map of Primorye showing the central crest of the Sikhote-Alin mountains and villages referenced in the text. Inset map shows north-east Asia, with Blakiston's fish owl range shaded in grey.

few **natural predators**. In fact, almost all known cases of mortality are related to chance encounters with humans. Fish owls are shot by hunters, drowned in poacher nets set for salmon, and killed in winter by traps meant for sable (*Martes zibellina*) or other furbearers. Last year, a fish owl near Ternei was shot by a trapper, who used the fish owl meat and feathers as a lure in his traps set for sable. Of the two known cases of natural fish owl mortality, the first owl was killed by a **lynx** (*Lynx lynx*) as it was hunting for fish along a river bank, and the second, a juvenile owl, was eaten when an **Asiatic black bear** (*Ursus thibetanus*) climbed into a fish owl nest and killed the young bird there. Because fish owls do not nest every



year, and only have one chick (in very rare cases two) when they do (Photo 2), any of these sources of mortality can have a strong negative impact on fish owl populations, especially since the global population is so small.

Surmach and I initiated a telemetry study in 2006 to examine the habitat use patterns of this species across much of their range in Primorye. Our study area covers more than 18,000 square kilometers of the eastern macroslope of the Sikhote-Alin mountains, from the Avvakumovka River in the south (near the village Olga), to the Maksimovka River in the north (near the village Amgu). The results of this study will allow us to predict areas with the best-quality habitat for the species in the province.

It is encouraging that local businesses have taken interest in our work - in 2007, the Amgu affiliate of the TerneiLes logging company approached us for information about how to alter logging practices in fish owl habitat to minimize impact on the owls. With the data we collect, we can pinpoint the areas of highest probability of fish owl occurrence in Primorye and, consequently, define the regions most worthy of conservation attention. Unused logging roads allow unrestricted access for poachers into areas once not available to them, and our research will allow us to date the enclosures of these roads. Road closures immediately reduce poacher access, which in turn helps reduce fatal fish owl encounters between illegal hunters and fishermen. Because many other species use the same old-growth riparian habitat that fish owls do, such as, **Amur tigers** (*Panthera tigris altaica*), **yellow-throated martins** (*Martes flavigula*), **brown bears** (*Ursus arctos*), and **Hodgson's hawk-eagles** (*Spizaetus nipalensis*), conserving fish owl habitat means protecting



Photo 2. A Blakiston's fish owl chick, only a few days old, at the Saion Creek pair's nest near Amgu, Primorye. Photo: J. Slaughter

the habitat of many of Primorye's other unique species as well. **RCN**

Краткое Содержание Статьи Джонатана Слата о Рыбном Филине

Зима. Приморье. Здесь, на берегу незамерзающих участков реки, сидит рыбный филин, карауля свою добычу. Завидя жертву, он выхватывает проплывающую мимо рыбу лапами с крючкообразными когтями. Ночью бродит он по мелководью, оставляя за собой характерный К-образный след.

Рыбный филин (*Ketupa blakistoni*) - крупная птица. Ее вес достигает 4,5 кг. Это самая крупная сова в мире. Вид этот редкий и исчезающий. Он занесен в Международную Красную Книгу. Рыбный филин селится в труднодоступных местах, таких как долины горных рек и ключей, незамерзающие зимой. Эти птицы ведут очень скрытный образ жизни.



Питается рыбный филин мелкой рыбешкой, которой в таких реках водится достаточно, чтобы перезимовать.

В 2005 Джонатан Слат начал сотрудничество с Сергеем Сумачем, научным сотрудником лаборатории орнитологии. Орнитологи стали изучать реки западных склонов Сихоте-Алиня на предмет обнаружения там рыбного филина (карта 3), хотя важнейшими регионами обитания считались поймы рек Бикин, Иман и Кхор, восточного склона Сихоте-Алинских гор.

Общая численность этой птицы в мире неизвестна. Существует два подвида - континентальный и островной. Островной подвид распространен на островах Хоккайдо (Япония) и юге Курильских островов, и составляет не более 60 гнездовых пар. Современный ареал континентального подвида выявлен недостаточно. Согласно данным Сумача, этот подвид существует в Хабаровском крае и Амурской области. Он считает, что на континенте может существовать около 800 гнездовых пар. Общая популяция составляет 5000 птиц, включая неспаренные особи и молодняк.

Немногие животные осмеливаются охотиться на рыбного филина из-за его крупных размеров. Смертность рыбного филина определяют антропогенные причины: отлов капканами на пушного зверя, отстрел и гибель в рыболовных сетях. Эти и некоторые другие причины гибели рыбного филина наряду с тем, что рыбный филин гнездится один раз в два года и кладка составляет всего 1-2 яйца, имеют крайне негативный эффект на популяцию этих пернатых обитателей.

Сумач и Слат провели оценку состояния популяции рыбного филина в 2006 году на территории размером в 18000 кв. км. на западных склонах Сихоте-Алинских гор, начиная от реки Аввакумовка на юге и



Photo 4. Blakiston's Fish Owl tracks along a frozen river bank in Primorye. Photo: J. Slaght.

заканчивая рекой Максимовка на севере. Результаты исследования дадут представление о важности этой территории для поддержания популяции рыбного филина.

Исследования, направленные на защиту рыбного филина, были поддержаны Приморскими предпринимателями. Местное представительство компании АОА «Тернейлес» обратилось к нам с просьбой о предоставлении им информации о гнездовых ареалах рыбного филина. Компания намерена сверяться с этими данными в своей хозяйственной деятельности.

Целью работы является защита рыбного филина, равно как и других редких животных, таких как Амурский тигр, утка-мандаринка, хохлатый орел и бурый медведь, от браконьеров путём создания заповедников в местах наиболее возможного обитания рыбного филина. *RCN*



Thomas Wright Blakiston - Soldier, Scholar, Businessman

Thomas Wright Blakiston was the first person to establish that animals in Hokkaido (Japan's northern island) belong to the Northern Asian family and differ in appearance from those in Honshu. As a result of Blakiston's work, the narrow sea called the Tsugaru Straits, which divides Hokkaido from Honshu, became known as an important border in the distribution of animal species. The straits are internationally known in biology as the "Blakiston Line."

Born to a wealthy British family, Thomas Blakiston was a soldier and a businessman who became well-known as an explorer and naturalist. In 1861, at the age of 28, Blakiston first traveled to the Far East. Failing to gain Russian permission to set up a lumbering operation on the Okhotsk Sea coast region of the Amur River, he selected Hakodate, Hokkaido, the northern island of Japan, as the site for his new enterprise.

Interested in birds from childhood, he collected and stuffed specimens himself and with an assistant, preserved many hundreds, 1,338 of which are now in the museum attached to the Agricultural Dept. of Hokkaido University, where they serve as important data for ornithological study. *RCN*



Vocabulary for the Blakiston Fish Owl Article

Fish Owl - рыбный филин

Dusk - сумерки, сумрак

To gurgle - журчать

Prey - жертва

To be adept at, adopt to - приспособленный

Talons - когти

Masu salmon - Сима (рыба семейства лососевых)

Impenetrable barrier - непроходимый барьер

Ornithologist - орнитолог

Island subspecies - островной подвид

Mainland subspecies - континентальный подвид

Breeding pair - гнездовая пара

Natural predator - естественный враг

Sable - соболь

Asiatic black bear - гималайский медведь

Lynx - рысь

Amur tiger - Амурский тигр

Yellow-throated martin - утка мандаринка

Brown bear - бурый медведь

Hudson's hawk-eagle - хохлатый орел
