

NEWS OF THE DAY



The Filtering Fields of Tver: A Unique Example of Human-Induced Avian Diversity

by Andrei V. Zinoviev

The Region of Tver, to the northwest of Moscow, lies in the heart of one of Russia's most historical areas, the Great European Watershed, where three mighty rivers originate: the Volga, Dnieper and Zapadnaya Dvina, or Daugava. Although it has been populated for centuries, Tver still possesses large, undisturbed natural areas. The fauna is remarkable, including such relic species as the Willow Grouse (*Lagopus lagopus*), Golden Eagle (*Aquila chrysaetos*), Lemming (*Lemmas schisticolor*) and Desman (*Desmana moschata*).

While human encroachment in the area continues to grow and influence the natural environment of Tver, fortunately the results are not always negative. Indeed, the filtering fields of Tver provide a surprising example of the effect of human activity on avian diversity. Constructed in 1960 to store pig manure from an adjacent farm, the filtering fields cover an area of six square km., just two kilometers northwest of the city of Tver, on the right bank of the Volga. Once covered by marshy coniferous forest, the area has now become an excellent biotope for numerous migrating species of birds! The fertile soil, nourished by the manure, provides an astonishing biomass of plants that serve as a food source for various rodents and seed-eating birds. The sporadic pools and extensive mud flats are full of arthropods and mollusks, offering migrating shorebirds an excellent spot for feeding and, in some cases, nesting.

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The rich diversity of Tver's avifauna is evident when we compare the number of species found in the area prior to the fields' creation with the number currently found there. For example, in

the marshy forest only one species of Charadriiforms, the Woodcock (*Scolopax rusticola*), was found. Now a lucky observer can identify 23 (!) species, many of whom are nesting.

Each year, several islands on the pond in the center of the fields harbor several hundred pairs of nesting Common (*Larus canus*) and Black-headed (*Larus ridibundus*) Gulls. Also, seven species of ducks have been recorded at the fields, five of which nest there regularly or occasionally, among which is the



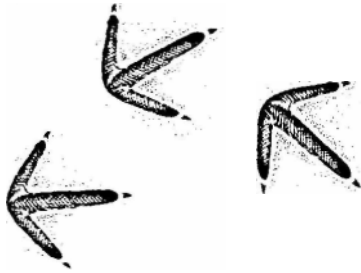
Species Found in the Tver Filtering Fields

These are some of the species that can be found in the filtering fields of the Tver region, with the nesting ones marked (N):

Oystercatcher (*Haematopus ostralegus*), Ringed Plover (*Charadrius hiaticula*), Little Ringed Plover (N) (*Charadrius dubius*), Golden Plover (*Pluvialis apricaria*), Lapwing (N), (*Vanellus vanellus*), Little Stint (*Calidris minutus*), Temminck's Stint (*Calidris teminckii*), Ruff (N) (*Philomachus pugnax*), Curlew (*Numenius arquata*), Black-tailed Godwit (*Limosa limosa*), Redshank (N) (*Tringa totanus*), Spotted Redshank (*Tringa erythropus*), Greens-

hank (N) (*Tringa nebularia*), Wood Sandpiper (N), (*Tringa glareola*), Common Sandpiper (N) (*Actitis hypoleucos*), Green Sandpiper (N) (*Tringa ochropus*), Terek Sandpiper (N) (*Xenus cinereus*), Marsh Sandpiper (N) (*Tringa stagnatilis*), Woodcock (N) (*Scolopax rusticola*), Great Snipe (*Gallinago media*), Snipe (N) (*Gallinago gallinago*), Jack Snipe (*Lymnocyptes minimus*) and Grey Phalarope (*Phalaropus fulicarius*). Flocks of some of these species such as the Ruff, Wood Sandpiper and Lapwing can number up to 100 individuals during the summer or fall.

rare Widgeon (*Anas penelope*). A great variety of seed and insect-eating passerines are found; each year, two pairs of the Citrine Wagtail (*Motacilla citreola*) nest in the suitable meadow-like lands alongside the drainage ditches.



The rich food supply attracts diverse and numerous predators, primarily raptors. For instance, a nesting site of the Kestrel (*Falco tinnunculus*) was sighted in a wooded area in the field. On average, five to six pairs of Buzzard (*Buteo buteo*) nest in adjacent forests. Additionally, the visitor can frequently meet the Red-footed Falcon (*Falco vespertinus*), Hobby (*Falco subbuteo*), Goshawk (*Accipiter gentilis*), Sparrow-hawk (*Accipiter nisus*), Marsh Harrier (*Circus aeruginosus*) and Hen Harrier (*Circus cyaneus*). What a thrill it is to watch the Marsh Harrier or Goshawk hunting!

Among other carnivorous birds, two species draw our attention. They are

the Raven (*Corvus corax*) and the Great Gray Shrike (*Lanius excubitor*).

Up to one hundred Ravens can be found at the filtering fields — an impressive number, when compared with the one or two pairs per several square km. in adjacent territories. The Great Gray Shrike, the biggest of our Shrikes, is an excellent subject to observe, as it darts into the grass and returns victoriously to its perch with a mouse or vole gripped in its stout, hawk-like beak. Its exacting movements in consuming or storing its prey are incredibly skillful and human-like.

And all of this diversity of life, of which only the avifauna has been described here, can be observed just two kilometers from a city of half a million! What a suitable area for educational natural history trips — a great area for scientific research created by human beings!

Unfortunately, now *dachas*, or summer cottages, are pushing out from the suburbs toward the filtering fields. So far we can only hope that the farm will continue to function as it has for a long time, providing wildlife with this unexpected sanctuary, and ensuring that scientists, naturalists and all who love nature will continue to enjoy and admire this unique place.

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