Rare breeding waders of the Moscow region: distribution and numbers

V.A. Zubakin, T.V. Sviridova, V.V. Kontorschikov, O.S. Grinchenko, E.V. Smirnova, S.V. Volkov, E.D. Krasnova & M.L. Kreindlin

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Eleven wader species are included in the first version of the Red Data Book of the Moscow region. One of these species - Jack Snipe *Lymnocryptes minimus* - ceased breeding at the end of the 19th or beginning of the 20th century; three species, *i.e.* Oystercatcher *Haematopus ostralegus*, Wood Sandpiper *Tringa glareola* and Greenshank *T. nebularia* breed in the Moscow region irregularly, as the region lies at the edge of their breeding ranges. The remaining seven species - Redshank *Tringa totanus* (several humdred pairs), Marsh Sandpiper *Tringa stagnalis* (up to 150-200 pairs), Terek Sandpiper *Xenus cinereus* (up to 100 pairs), Ruff *Philomachus pugnax* (up to 150 pairs), Great Snipe *Gallinago media* (up to 100-150 pairs), Curlew *Numenius arquata* (70-90, but probably up to 100-110 pairs) and Black-tailed Godwit *Limosa limosa* (200-250 pairs) breed regularly in the Moscow region. The most threatened species are Great Snipe and Ruff; Curlew is less vulnerable.

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В Красную книгу Московской области занесены 11 видов куликов. Один из этих видов - гаршнеп *Lymnocryptes minimus* - перестал гнездится в конце 19-ого или в начале 20-ого века; три вида, а именно кулик-сорока *Haematopus ostralegus*, фифи *Tringa glareola* и большой улит *T. nebularia* гнездятся в Московской области нерегулярно, потому что область расположена на границе их гнездовых ареалов. Остальные семь видов - травник *Tringa totanus* (несколько сотен пар), поручейник *Tringa stagnatilis* (до 150-200 пар), мородунка *Xenus cinereus* (до сотни пар), турухтан *Philomachus pugnax* (до 150 пар), дупель *Gallinago media* (до 100-150 пар), большой кроншнеп *Numenius arquata* (70-90, но, вероятно, до 100-110 пар) и большой веретенник *Limosa limosa* (200-250 пар), регуляно гнездятся в Московской области. Видами, находящимися под наибольшей угрозой исчезновения, являются дупель и турухтан; большой кроншнеп - менее уязвимый вид.

Introduction

Eleven wader species have been included in the first version of the Red Data Book of the Moscow Region, adopted in October 1993. They are the following: Oystercatcher *Haematopus ostralegus*, Wood Sandpiper *Tringa glareola*, Greenshank *Tringa nebularia*, Redshank *Tringa totanus*, Marsh Sandpiper *Tringa stagnatilis*, Terek Sandpiper *Xenus cinereus*, Ruff *Philomachus pugnax*, Jack Snipe *Lymnocryptes minimus*, Great Snipe *Gallinago media*, Curlew *Numenius arquata* and Black-tailed Godwit *Limosa limosa*.

In this paper we attempt to summarise all known data on the distribution and numbers of these waders for the whole area of the Moscow Region (47,000 km^2). Both published data and information collected between 1977-1993 during special studies of rare birds (the "Fauna" programme) were used. The latter studies were conducted by a large number of students and specialists, who were mostly the members of the Group for Nature Conservation of Biological Faculty, Moscow State University. The authors of this report were also among these members. During the studies almost the whole area of Moscow Region was surveyed. Breeding of any species was considered as proved, if clutches or downy/unfledged chicks were found. Breeding was supposed in cases when either the anxiety behaviour of waders was observed in the breeding season, or displaying males were present at the same site during one or several breeding seasons.

Results

Oystercatcher *Haematopus ostralegus*

Oystercatcher breeds most years as single pairs on the banks of the Oka river between Kolomna town and the boundary of Ryazan Region. A nest was found on 13 June 1962 near the Lovtsy (Ptushenko & Inozemtsev, 1968), and a single bird was observed near that place on 28 June 1980 (Zubakin *et al.* 1986). A pair of adult Oystercatchers with a grown unfledged chick was recorded on 16 June 1992 at the Oka river bank in Ryazan Region 1 km from the boundary with Moscow region (V.M. Yemelyanov, pers. comm.).

Wood Sandpiper *Tringa glareola*

Wood Sandpiper was considered historically to be a common migratory and breeding wader of Moscow Region (Lorenz 1892; Polyakov 1924; Smolin 1948), although it is quite probable that oversummering individuals and late migrants were supposed by these authors to be breeding. Ptushenko & Inozemtsev (1968) mentioned only one proved breeding record - in the Egoryevsk area (the eastern part of the region), but did not give any details of this record. We know of only one case of proved breeding (Figure 1): on 10 July 1990 one recently fledged young chick was frightened away at the regenerating peatland-pits 7 km south of Taldom town; two adults were alarming nearby (A.L. Mischenko pers. comm.). Sporadic records of this species and even of displaying birds are known for the breeding season at some fishery ponds, peatlands and flood-plain marshes in northern and eastern parts of the region, although the majority of these records probably relate to late migrants and oversummering non-breeders. Evidently, Wood Sandpiper is an extremely rare and sporadic breeding species, found in the Moscow region at the southern limit of its breeding range. On migration, however, this wader is common.

Greenshank *Tringa nebularia*

Greenshank was considered to be a common breeding species at the end of the 19th and the beginning of the 20th century (Lorenz 1892; Polyakov 1924); however, as for Wood Sandpiper this status may have resulted in confusing oversummering and late migrant birds with breeding Greenshank. Greenshank is currently extremely rare in the region, and single pairs breed most years. On migration it is quite common, although less common than Wood Sandpiper. Three proved breeding records are known: on 25 May 1941 a nest with a completed fresh clutch was found near Polyshkino settlement in the western part of the region (Ptushenko & Inozemtsev 1968); on 28 June 1962 a downy Greenshank chick was caught at the regenerating peatland-pits south of Taldom town (Butiev 1973); and on 27 May 1978 a nest with four incubated eggs was found at the peatland pit in the vicinity of Voimezhnoye lake in the east of the region (Garushants *et al.* 1990). According to our data breeding is probable also on the Batkovskoye raised bog in the northern part of Sergiev-Posad district, where one displaying male was observed from 28 May to 1 June 1986; at the peat-excavation pits north of Beloomut settlement, where single foraging birds were recorded during summer 1991; and north of Shatura district, where pairs and single birds were observed in different sites late in May 1979-1990 (Figure 1).

Redshank *Tringa totanus*

Redshank have bred in the Moscow region probably since the beginning or the middle of the 20th century; breeding was proved for the first time only in 1966 (Butiev 1973; Zubakin *et al.* 1986). This species currently rarely breeds, its population is dispersed mostly in the eastern part of Moscow region (Figure 1). Single pairs and groups of two to seven pairs inhabit flood-plain grass marshes, pastoral parts of flood-plain meadows, regenerating peatland pits and other boggy areas where peat has been formerly extracted. The largest known colony of Redshank is at the Vinogradovo flood-plain (the left bank of the Faustovo flood-plain of the Moskva river); 50 to 55 breeding pairs of this species were recorded there in 1983 (Zubakin *et al.* 1988). In total we estimate the Redshank population inhabiting the Moscow region to be several hundred pairs.

Marsh Sandpiper *Tringa stagnatilis*

Marsh Sandpiper was sporadically recorded on migration in the first half of the present century; no breeding records were indicated (Lorenz 1892; Polyakov 1924; Smolin,1948), although breeding in more recent years was indicated by some authors (Ptushenko & Inozemtsev, 1968). The species is currently a rare breeder, and mainly inhabits the northern and eastern parts of the Region. Breeding has been confirmed only for the Vinogradovo flood-plain (Zubakin *et al.* 1988), the Yahroma river flood-plain near the town of Dmitrov (Kislenko *et al.* 1990), the Klyazma river flood-plain near the Drezna river mouth (P.S. Tomkovich, pers. comm.), and the Oka flood-plain in the vicinity of the settlements of Dedinovo and Lubychy. In 1966 Marsh Sandpipers were evidently breeding at the sewage reservoirs near Lubertsy town (Spangenberg & Zhuravlev 1967). Pairs of birds showing anxiety behaviour (indicating the

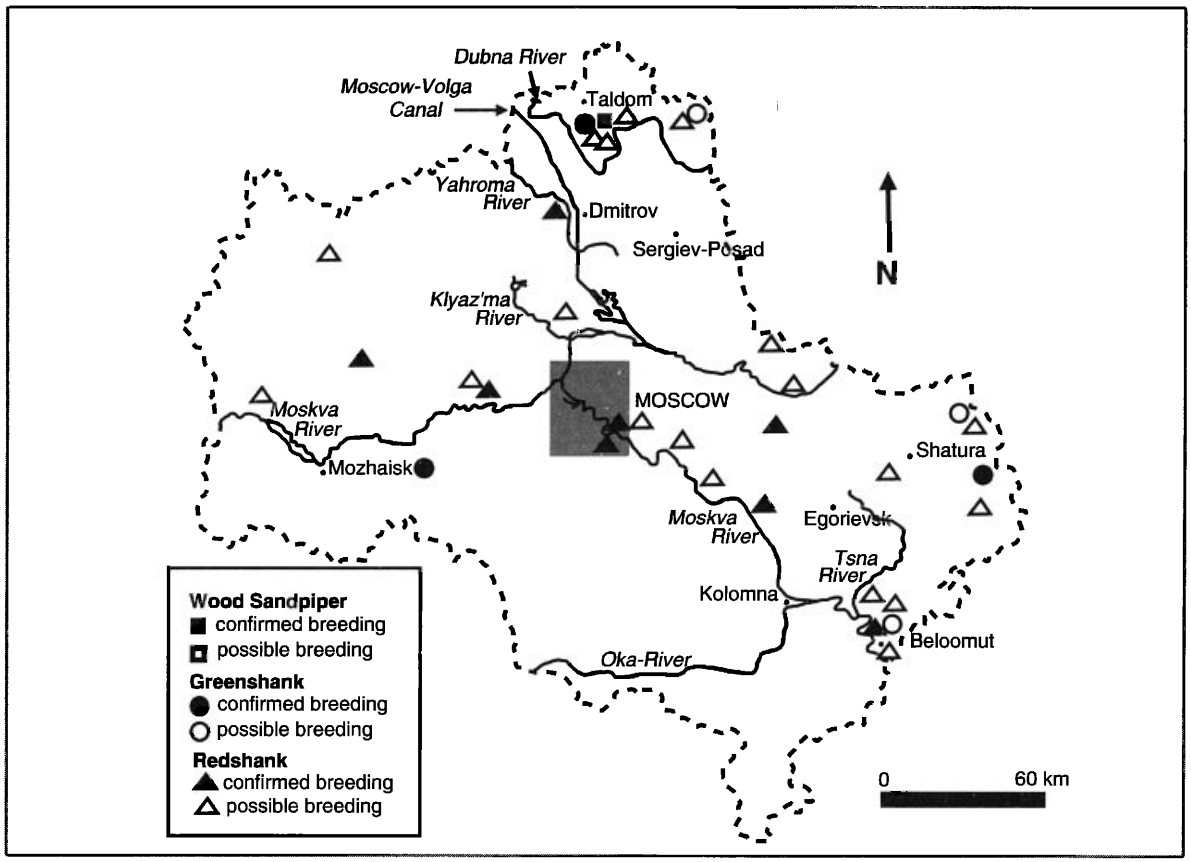

Figure 1. Distribution of Wood Sandpiper, Greenshank and Redshank.

probability of breeding), were recorded in the 1980s and early 1990s in restricted areas of the Dubna river flood-plain (Kislenko *et al.* 1990), in the Moskva, Klyazma and Tsna flood-plains, at the small sewage ponds near the Pavlovskaya Sloboda settlement (V.T. Butiev pers. comm.), and on wet meadows in the northwest of the Region. Several displaying males were observed from late April to early May in the extreme southwest of the region (Mozhaisk district) and in the southern part of Egorievsk district (Figure 2).

Marsh Sandpipers inhabit mostly wet flood-plain meadows or pastoral sites, where at least small water bodies (draining canals, ponds etc.) are present. It is also found, though comparatively rarely, in the bottom of empty fishery ponds (Tomkovich 1990) and boggy areas where peat excavation has taken place. Most Marsh Sandpipers, 65 to 70 breeding pairs, are found on the Vinogradovo flood-plain (Zubakin *et al.* 1988), however, at other localities it is recorded either as single pairs or in groups of two to eight pairs. The total regional population of Marsh Sandpiper hardly exceeds 150-200 breeding pairs. According to some data its numbers are slowly increasing.

Terek Sandpiper *Xenus cinereus*

Terek Sandpiper is currently a rare and sporadic breeder. Until the mid 20th century it was considered in the region as a rare migrant, even as a vagrant, and the first nests were found only in 1973 (Blagosklonov 1976). Before 1979 breeding was only recorded at the Lublino sewage water reservoirs and at the Ruza water reservoir (Blagosklonov 1976; Schadilov 1980), but in 1979-1992 breeding was confirmed on the Vinogradovo flood-plain (Zubakin *et al.*, 1988), on the flood-plain of the left bank of the Oka river in the Stupino district, at the ponds of the Klinsky fish farm (Zubakin *et al.* 1986), at the Borisovo ponds within Moscow (Tomkovich 1990), the surroundings of Dmitrov town (Kislenko *et al.* 1990), and on the Klyazma river flood-plain near the Drezna river mouth (P.S. Tomkovich, pers. comm.). Based on records from the reproductive period, breeding is also thought to have occurred at the sewage water-reservoirs near Lubertsy town (Kislenko *et al.* 1990), in the south-eastern part of Egorievsk district, near Lotoshino fish farm, on the Moskva river flood-plain near the Gzhelka river mouth (Figure 2). Breeding is also probable on the Oka flood-plain near Dedinovo and Lubychy settlements (north-west of Beloomut), where Terek Sandpipers were regularly observed during breeding seasons in the 1980s; nevertheless, during thorough surveys in 1991 only wandering single birds were found there. Terek Sandpipers nest on bare ground, often at sites with a complete absence of any grass cover (bare fallows, peatlands, dry mudflats at the bottom of fishery ponds, near the water reservoirs or at the edges of drainage canals). As these sites are temporary, the birds change nesting sites, and even breeding localities between years. The total regional breeding population of Terek Sandpiper is less than 100 pairs.

Ruff *Philomachus pugnax*

Both in the past and currently Ruff has been considered as a common migrating, and rare sporadic breeding species (Lorenz 1892; Polyakov

1924; Smolin 1948; Zubakin *et al.* 1986). Recently the only area where breeding has been confirmed is on the Vinogradovo flood-plain, where at least 15 constant leks and *c.* 100 breeding females were recorded in the first half of the 1980s (Zubakin *et al.* 1988). Judging by observations of females displaying anxiety behaviour in late June 1983, a small number of Ruffs breed also at the right bank of the Moskva river (on the bank opposite the Vinogradovo flood-plain). According to published data small numbers of Ruffs bred in 1982 on the Yahroma and Dubna flood-plains, and in 1986 breeding was supposed at the Lubertsy sewage water-reservoirs (Kislenko *et al.* 1990; Figure 2).

Unfortunately it is still not known whether these reports are based on nesting records, or only on records of females in the breeding season. Although there is no other information on the breeding of Ruff in other parts of the Moscow Region, the existence of as yet unknown small breeding colonies seems quite probable. For example, it is most probable that they breed on the undamaged flood-plain meadows along the Klyazma river, as breeding records are known for nearby areas in Vladimir Region (Kislenko *et al.* 1990). The total regional population of Ruff, even with such presumed breeding colonies, is less than 150 breeding females.

Jack Snipe *Lymnocryptes minimus*

The only known and confirmed breeding record of Jack Snipe for the Moscow Region was described in the paper by Lorenz (1892); he mentioned the capture of unfledged chicks on 11 July 1865 on the bogs along the Vorya river near Kablukovo settlement (30 km south from Sergiev-Posad). However, these specimens are not available, and it is impossible to confirm whether the identification was correct. Broods of Jack Snipe were also found in the past century in the Tver Region (Kozlova 1962), Vladimir and Orel Regions (Menzbier 1895), so the breeding of this species was quite possible in the Moscow Region also. In the 20th century the only indication of breeding by this species in the Moscow Region was in the 1930s (Yevtiukhov 1941), based on questionnaires completed by game-hunters. No more recent data on breeding by this wader are known, although displaying birds were observed in spring 1986 at the bog south of Telma settlement (*c.* 40 km southeast of Shatura town; A.N. Pegova, pers. comm.). As it was not observed there later in the breeding season, this record probably is of a display by a migrating male. Jack Snipe ceased breeding in the Moscow Region at the end of 19th/ beginning of the 20th century; in the 19th century it probably nested there sporadically (Polyakov 1924), as is typical at the edge of the breeding range.

Great Snipe *Gallinago media*

The number of Great Snipe had already sharply decreased by the beginning of the 20th century (Polyakov 1924); and currently the species faces the threat of complete extinction in the region. The main reason for this decline is the drainage of fens and grass/boggy areas, and the ploughing of flood-plain meadows. Currently only three areas are known in the whole region, where leks of Great Snipe remain. These are in the Vinogradovo flood-plain of the Moskva river (three to five leks in mid-1980s, each of nine to 70 birds; Zubakin *et al.* 1988), the Oka flood-plain near the Dedinovo and Lubychy

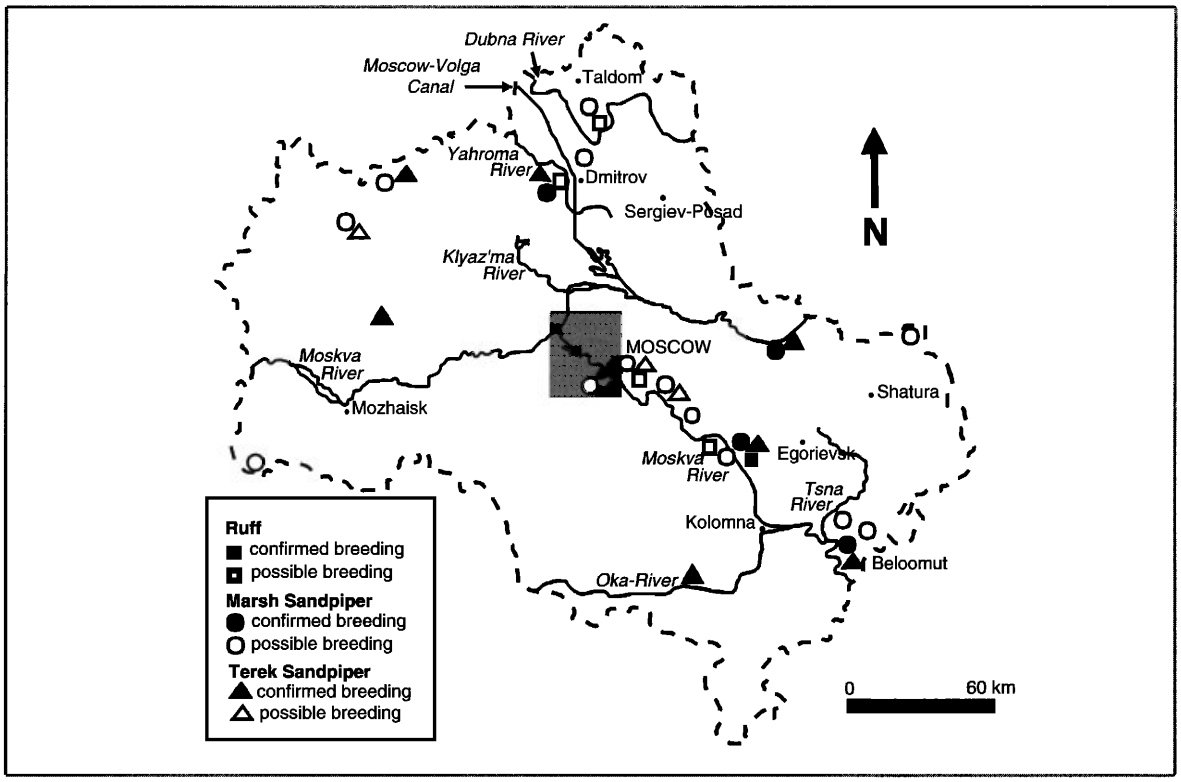

Figure 2. Distribution of Marsh Sandpiper, Terek Sandpiper and Ruff .

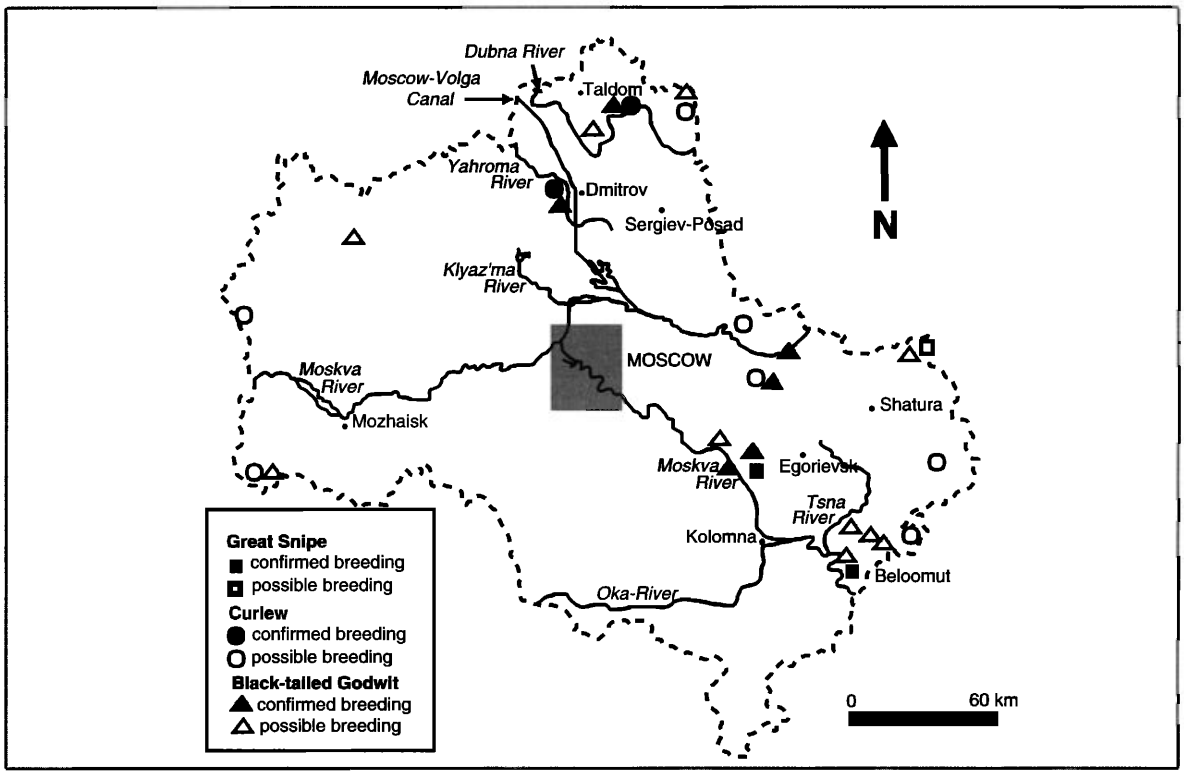

Figure 3. Distribution of Great Snipe, Curlew and Black-tailed Godwit .

settlements, where at least two leks (6-15 individuals) are known since 1987, and the Klyazma river flood-plain in the northern part of the Shatura district, where 15 to 20 Great Snipe were counted on 2-3 May 1990 on a 3 km route through the flooded meadows as well as a small lek which was recorded by A.P. Petrischeva (pers. comm.) at the end of May (Figure 3). Nests were only found at the first two localities, although breeding also seems quite probable in the third mentioned area. According to information from local inhabitants, the existence of small leks and breeding Great Snipe can also be supposed on the Klyazma river flood-plain (Orekhovo-Zuevo district), on the Polya and Yalma river flood-plains (central and southern parts of the Shatura district), and in the meadows along the peatlands at the boundary of Orekhovo-Zuevo and Shatura districts. The breeding population of Great Snipe in the Moscow Region is less than 100-150 displaying males.

Curlew *Numenius arquata*

Curlew was a common breeding species, inhabiting peat-bogs and flood-plain meadows, until the beginning of the 20th century (Polyakov 1924; Smolin 1948). Owing to the drainage of peatlands and the ploughing of flood-plain meadows, numbers had drastically declined by the 1960s, disappearing from most previous breeding areas, and remaining only in several restricted sites (Zubakin *et al.* 1986). Currently, only nine places are known where breeding by Curlew has been either confirmed or is probable (Figure 3). It has been confirmed with nest records in the Taldom region and in the vicinity of the "Homeland of the Cranes" Nature Reserve. According to counts between 1984-1986 the numbers of breeding Curlew were estimated to be between 55-60, and probably up to 70 pairs. Of these 35-45 inhabited upland and transitory bogs of the Dubna bog massif, with the remaining 15-25 pairs nesting on the nearby meadows and farmland. The other breeding sites of this species in the Moscow Region are comparatively small (not more than a few pairs), and are located in the remnants of peatbogs, peatlands that are regenerating after exploitation, and on the meadows of Dmitrov district (Kislenko *et al.* 1990), the Shakhovskoy district (Mischenko & Sukhanova 1990), and Sergievo-Posad, Pavlovo-Posad, Shatura and Mozhaisk districts. The total regional breeding population is estimated as 70-90 pairs, probably up to 100-110 pairs. Numbers are currently stable.

Black-tailed Godwit *Limosa limosa*

Black-tailed Godwit, in contrast to Curlew, was rare in the region at the beginning of the 20th century. Although numbers have increased since that time, it is still a comparatively rare bird. Black-tailed Godwit inhabit meadows, pastures, as well as old peat-fields; and more often than Curlew it also occupies fields of winter cereals and other cultivated crops. Currently there are six known areas where this species has been confirmed breeding; in ten more areas breeding is probable but has yet to be proved (Figure 3). The largest Black-tailed Godwit breeding site is located on the Vinogradovo flood-plain of the Moskva river, where 100-120 pairs of birds bred on hay-meadows and pastures between 1985-1988 (Zybakin *et al.* 1988). The second largest population was found at the meadows along the Khotcha and Dubna rivers in Taldom district ("Homeland of the Cranes" Nature Reserve and the surrounding area); 35-40 breeding

pairs were counted there in 1984. In other known areas Black-tailed Godwit nest as single pairs or in small groups. The total number of birds counted in such areas is *c.* 200 birds; thus taking into account probable unknown small breeding areas, we estimate the total regional population of this species to be about 250 pairs. Numbers of this species in the Moscow Region are still increasing.

Discussion

If we exclude from consideration those species occurring in the Moscow Region at the limits of their breeding ranges, *i.e.* Oystercatcher, Wood Sandpiper and Greenshank, the most vulnerable waders are Ruff, Great Snipe and Curlew. Ruff and Great Snipe have very specific habitat requirements, and their survival in the Moscow Region depends mostly on the conservation of vast flood-plain meadows. Recently the Vinogradovo flood-plain, the main breeding area of these species, as well as of many other rare waders, was declared as a protected territory. In 1986 a 2,000 ha regional natural sanctuary was formed there. Unfortunately the continuing changes in land-use policy can negatively influence the future of this sanctuary, which was formed from the fertile agricultural lands of former collective farms.

Curlew seems more ecologically adaptable than Ruff and Great Snipe and can partly switch to breeding on farmland, although this process has some constraints. It is also significant that those habitats prefered by this species, *i.e.* large bogs, have been protected as well. In four out of nine known breeding sites special sanctuaries have been created and the major part of the breeding population is protected in the "Homeland of the Cranes" Nature Reserve.

As Redshank, Marsh Sandpiper, Terek Sandpiper and Black-tailed Godwit have even broader habitat selection and seem to be able to breed on farmland without difficulty, the future status of these species does not give grave concern.

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