

## BREEDING WADERS IN POLAND

by Jadwiga Gromadzka, Tadeusz Stawarczyk and Ludwik Tomialojc

The main breeding areas of waders in Poland are some extensive marshes in the east, hundreds of km of riversides or river valleys, and some coastal areas. This paper lists areas of importance for waders, which were found and/or described during 1970s and 1980s. Our knowledge of such sites has improved greatly in recent times and we do not expect to discover new areas equivalent to our first-class sites like the Biebrza Marshes, the Narew valley, or the middle course of the Warta river in the future. However, several sites of regional or local importance may remain to be discovered.

We summarize also the status of each breeding wader species, and quantitative data, when known, are given in Table 1. Much of the information that we summarize here is from the book *Ptaki Polski* (Birds of Poland) by L. Tomialojc (1972, second edition in press).

### AREAS OF IMPORTANCE TO WADERS

An annotated list of areas is given below. The numbers refer to those in Figure 1, which shows the location of places mentioned in the text and in Table 1.

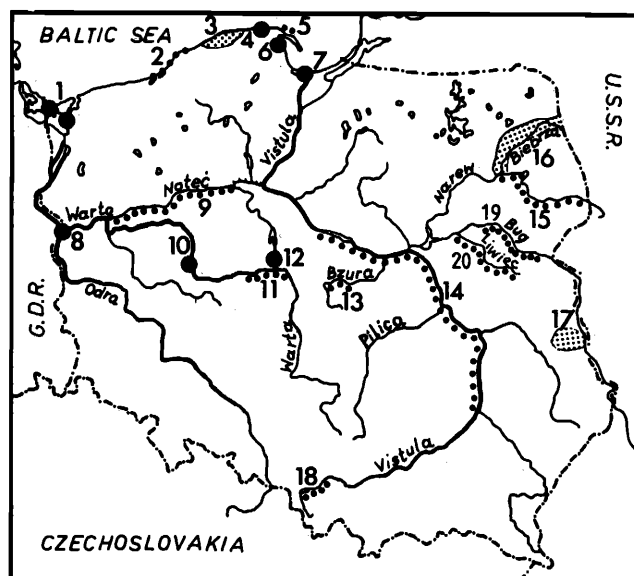


Figure 1. Breeding sites of waders in Poland. Site numbers are those given in the text and in Table 1.

**1. Coastal meadows near Swinoujscie and on Wolin Island.** Bednorz (1972) proposed to establish a nature reserve (42 ha) and gave notes on the numbers of birds in the eastern part of the Row peninsula (Wolin Island). General characteristics of habitat and breeding waders in the whole area are described by Krol (in press a). Three very rare breeding species for Poland breed here: Dunlin *Calidris alpina schinzii*, Ruff *Philomachus pugnax* and Oystercatcher *Haematopus ostralegus* (Jakuczun 1980).

**2. Baltic coast between Mielno and Ustka.** Gorski (1976) published bird counts for this area of ca. 380 km<sup>2</sup>, which includes 5 coastal lakes. Several pairs of Dunlin breed on the southern coast of Jamno Lake (W. Gorski pers. comm.). This breeding site has been known since the 19th century.

**3. Slowinski National Park.** In its centre are two large coastal lakes: Lebsko (about 7140 ha) and Gardno (about 2468 ha), separated from the sea by a chain of sand dunes. Around the lakes and dunes are meadows, pastures and some peat bogs that support several species of breeding waders (Bednorz 1983). The place was known in the past as a breeding site of Dunlins, but because grazing ceased at the site in 1975, they probably do not breed there now.

**4. Bielawskie Bloto (= Bielawskie Bog).** These are coastal raised bogs of the Atlantic type, covering an area of about 10 km<sup>2</sup>. Although the area has been much destroyed by human activity, it still remains unique. Apart from common species it contains the only breeding site of the Wood Sandpiper *Tringa glareola* in Poland (Gromadzki in press).

**5. Hel peninsula.** A narrow sandy peninsula north of Gdynia, separating the Bay of Puck from the open sea. At its base, near Wladyslawowo, there are coastal meadows, which are a former breeding site of some waders including Dunlins. Now waders gather there and also in the local sewage farm near Jastarnia mainly during migration. Some single pairs of Oystercatchers breed there (Krol in press a).

**6. Reda mouth.** The small river Reda flows into the Bay of Puck, and at its mouth forms a very wide valley. On the left side of the mouth there is a large (c. 100 ha) pasture, with the highest concentration of breeding Dunlins in the country (Krol 1982, Gromadzka 1983, Krol in press b). 1-2 pairs of Oystercatchers regularly breed there. The area is also a very good site for catching waders during the autumn migration. On the right side of the river mouth, there is a grazed area of c. 50 ha in size where, amongst several wader species, some pairs of Dunlin and 2 pairs of Oystercatcher breed, too (Krol in press a).

**7. Vistula mouth.** There are sandy alluvial ridges, sandy peninsulas and islands surrounded by shallow off-shore waters. Deposition processes and storm water movements lead to a continual transformation of this area. Only a few Oystercatchers breed there, and also a few pairs of Ringed Plover *Charadrius hiaticula* and Little Ringed Plover *Charadrius dubius*. During autumn migration flocks of waders regularly concentrate in this area and they have been ringed there for several years (Gromadzka 1981).

**8. Kostrzyn Retention Reservoir.** Flood land of the Warta river at its junction to the Odra river. Numerous old drainage canals, shallow lakes, meadows and pastures make this area of special importance to waterfowl and to some waders. Many breeding waders belonging to 7 species were found in the area 50 km<sup>2</sup> covered by observations (Nowysz and Wesolowski. 1972). Slonsk Nature Reserve has been established on

Table 1. Numbers of pairs of breeding waders in areas of Poland from which numerical data is available. Site numbers refer to those in the text and in Figure 1.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Oystercatcher																				
<i>Haematopus ostralegus</i>	1				1-2	3-4	2							1						
Stone Curlew														3	1				3	
<i>Burhinus oedicephalus</i>																				
Little Ringed Plover			4		a few	a few	a few	5-7	+					160	60-70		50	55-62	4	
<i>Charadrius dubius</i>																				
Ringed Plover		90	30		≤10	10	a few				45-50			60	40			40-45		
<i>Charadrius hiaticula</i>																				
Lapwing																				
<i>Vaneltus vanellus</i>	50	120-140	70-85	10-12		25		200-260	1000+	40	+	130+	+	40	+	2000	0.5/ha	+	+	380-420
Dunlin																				
<i>Calidris alpina schinzii</i>	15	a few	7-16?			60+														+
Ruff																				
<i>Philomachus pugnax</i>	15	a few	8?			5		20-30		2	30*	1-7	30*	30*	30*	300*	a few		?	
Jack Snipe																				
<i>Lymnocyptes minimus</i>																2+				
Snipe																				
<i>Gallinago gallinago</i>	20	40-50	25-30	6-10		2-3		120-150	+	10-15	+	50+	+		+	6000-12000	0.5/ha	40-50	100-110	93-104
Great Snipe																				
<i>Gallinago media</i>																	370*	+	32*	1?
Black-tailed Godwit																				
<i>Limosa limosa</i>	7	a few	6					130-160	200	17-36	500	≤110	1000	≤5	1000	1000	300	50	230-270	160-180
Curlew																				
<i>Numenius arquata</i>	3		1-3					11-13	150			6	9-13		100	50-75	35-40	4	4	≤7
Redshank																				
<i>Tringa totanus</i>	10	<20	9			8		70-90	20-30	5-16	250	≤20	70-80		200	200	30-45	50	55-65	4
Wood Sandpiper																				
<i>Tringa glareola</i>																				
Green Sandpiper																				
<i>Tringa ochropus</i>																				
Common Sandpiper																				
<i>Actitis hypoleucos</i>	1																			+

+ breeding, but no numerical data  
 ? breeding status currently unknown  
 \* number of nesting females  
 \* number of displaying birds

4166 ha of the area, being one of the most important waterfowl reserves in the country (Majewski 1983). During autumn migration large flocks of waders concentrate there.

**9. Notec valley.** A wide flat river valley with extensive meadows and some fish ponds. In the 1970s, ornithological observations were carried out in the middle section of the valley, over an area of 130-140 km<sup>2</sup> of drained meadows and on four complexes of ponds (Nowysz and Wesolowski 1973). The middle and lower sections of the valley are considered to be the most important region for breeding Curlews *Numenius arquata* in Poland (Bednorz, after Tomialojc in press).

**10. Flooded meadows in the Warta valley near Poznan.** Eight years of detailed studies on an area of 182 ha of this valley were described by Bednorz (1976). Breeding densities of several waders are given. The area has subsequently been drained and the habitat is now changed.

**11. Flooded pastures in the middle Warta valley.** Three years of studies were carried out in an isolated area of 260 ha pastures by Winiecki (1983). The section of the valley from the town of Kolo to the Proсна river junction is an important breeding area for Black-tailed Godwits *Limosa limosa* and Redshank *Tringa totanus* (Lewartowski and Chylarecki, after Tomialojc in press).

**12. Kramsk Marshes.** The birds of this big complex of peatbogs, meadows and pastures near Konin have been described by Nawrocki et al. (1983). Unfortunately this area has also been partly reclaimed in recent years.

**13. Bzura valley.** A marshy river valley between Leczyca and Lowicz with meadows and pastures. One of the largest breeding sites of the Black-tailed Godwit, Redshank and Ruff (Markowski and Wojciechowski in press).

**14. Islands in the middle Vistula course.** An unchannelled river section about 400 km long, from the junction of the San river and Vistula to the town of Plock was studied, and 3 pairs of Stone Curlews *Burhinus oedicanus* (an extremely scarce breeder in Poland) were estimated to breed there. A significant percentage of the Polish breeding population of Ringed Plovers and Little Ringed Plovers was found there (Wesolowski et al. 1984).

**15. Narew valley.** The river Narew flows through relatively less transformed regions of Poland and is inhabited by numerous birds that are scarce, or very scarce, in other parts of the country. Unfortunately there are projects to regulate the river flow and work has already begun. Ornithological observations were made, during a canoe trip in 1973, along the river sides including 31 km<sup>2</sup> of pastures, fallows and dunes. 1-2 pairs of Stone Curlew bred near Czartoria (Domaszewicz and Lewartowski 1973). The marshland in the middle and upper part of the valley contains a good number of Ruff and very high numbers of Snipe *Gallinago gallinago*, Black-tailed Godwits, Curlews and Redshanks (Lewartowski and Pugacewicz after Tomialojc in press).

**16. Biebrza Marshes.** These are the largest fens in Central Europe (c. 100 km<sup>2</sup>) that have been preserved in their natural state. They are the overflow land of the Biebrza river and are very important as breeding, resting and feeding places for many wader and waterfowl species during their breeding and migration time. Studies carried out by Dyrzcz et al. (1972,

1984) have recorded nesting by 156 bird species (see Table 1 for details of waders). This is the only breeding place in Central Europe of the Jack Snipe *Lymnocyptes minimus*, as well as biggest breeding concentration of the Great Snipe *Gallinago media* and Ruff. Very large breeding populations of Snipe, Black-tailed Godwits and Redshanks occur there. It is also the only recent inland breeding site of Dunlins in Poland.

**17. Leczna-Wlodawa Lake District.** An area of c. 1200 km<sup>2</sup> of which 20% were peatbogs, was investigated (Dyrzcz et al. 1973). It includes 68 natural lakes and some groups of fish-ponds. To what extent the ornithological data are valid now is not known, for large parts of the peat bogs have been reclaimed in recent years.

**18. The upper Vistula valley and the Goczkowice Reservoir.** The largest reservoir (c. 32 km<sup>2</sup>), and a large area of fish-ponds, in the Vistula valley. This is the most important area for breeding Redshanks and Black-tailed Godwits in southern Poland.

**19. Bug Valley.** About 75 km of the river Bug, with c. 200 km<sup>2</sup> of surrounding land, between Malkinia and Wolka, was studied in 1983 and 1984 by S. Chmielewski (in litt.) and B. Pryzstupa (pers. comm.). There are many attractive places for breeding waders, especially in the surrounding water meadows and pastures, some of which have been drained. Other habitats of importance for breeding waders are flat sandy beaches, and old river beds where the water course has changed. Breeding Ringed Plovers, Little Ringed Plovers and Black-tailed Godwits were numerous. Near the village of Prostyn there were up to 24 displaying male Great Snipe (S. Chmielewski in litt.); there were also a few displaying males near Tonkiele (B. Pryzstupa pers. comm.). Two breeding sites, each with a single pair, of Stone Curlews, remain near the villages of Rybaki and Molozew. Dunlins probably breed near Molozew (B. Pryzstupa pers. comm.).

**20. Linwiec valley.** Observations were made in 1981, 1982 and 1984 over the whole length of the river valley (c 70 km<sup>2</sup>) by M. Rzepala (in litt.). The river channel is regulated in some parts only, but the water meadows have mostly been drained. The most numerous breeding waders are Lapwings, Black-tailed Godwits and Snipe.

#### BREEDING SPECIES OF WADERS

Below are some brief comments on the abundance and distribution of breeding waders in Poland. Numbers of breeding pairs, where these are known, are given in the Table 1. Area numbers are those listed above, and scientific names are listed in Table 1.

**Oystercatcher.** An extremely scarce breeding species, with not more than 10 pairs in Poland. A few pairs breed in areas 1, 5, 6 and 7 (E. Krol pers. comm.). Inland only a single pair has been breeding since 1982 in the middle Vistula near Kazimierz Dolny (Tomialojc in press).

**Stone Curlew.** Formerly widespread throughout the country, but now on the verge of extinction. 3-5 pairs breed in the middle Vistula section (Wesolowski et al. 1984), c 3 pairs in the Bug valley (Tomialojc in press), and 1-2 pairs in the Narew valley (Domaszewicz and Lewartowski 1973).

**Little Ringed Plover.** Scarce breeder in the lowlands and highlands of the whole country (c.

1000-1500 pairs). Somewhat more numerous only in valleys of big rivers, e.g. at least 170 pairs in the middle Vistula section (Wesolowski et al. 1984), c. 60-70 pairs each on the Bug, Narew and in the middle and lower Warta rivers (Tomialojc in press). In the province of Silesia numbers are estimated at 250-300 pairs; there Little Ringed Plover have bred also on the disused industrial areas of the Upper Silesian mining district.

**Ringed Plover.** Regularly breeds on the coast and along big rivers, occasionally also on lakes and fish-ponds. Tomialojc (in press) gives an estimation of 350-400 pairs for the whole country. It is most numerous as a breeding species on the sea coast (c. 130 pairs), in the middle Vistula (c. 60 pairs), and in the middle Warta and Bug (c. 50 pairs each).

**Lapwing.** Fairly numerous throughout the country except in the mountains. Very locally numerous in river valleys, e.g. in the Biebrza Marshes estimated at 1700-2000 pairs (Dyrzcz et al. 1984) and over 1000 pairs in the Notec valley (Bednorz, after Tomialojc in press).

**Dunlin.** 80-100 pairs of *schinzii* race Dunlins breed in Poland (Gromadzka 1983). They are distributed mainly along the coast, with the greatest concentration (c. 60 pairs) in the Reda mouth (Krol in press b). Several pairs breed also inland in the Biebrza Marshes (Dyrzcz et al. 1984) and probably a single pair at the Bug river (B.Przystupa pers. comm.).

**Ruff.** Formerly widespread in the most of lowlands. Now a very rare breeding species in northern Poland. Breeding pairs vary yearly. Females have been estimated recently at 350-400 for the whole country (Tomialojc in press). The most important breeding sites are Biebrza Marshes (200-300 females (Dyrzcz et al. 1984)) and the valleys of the middle Narew, the middle Warta and Bzura (c. 30 females in each (Lewartowski and Pugaczewicz after Tomialojc in press, Winięcki 1982, Markowski and Wolciechowski in press)).

**Jack Snipe.** Bred sporadically during the 19th century in the Lublin province, in Pomerania, and probably in Silesia (Tomialojc 1972). Now extremely rare and a few pairs only recorded as breeding in the Biebrza Marshes (Dyrzcz et al. 1984).

**Snipe.** A rather scarce breeding species in southern and central Poland, while locally still quite numerous in northern and eastern parts of the country, e.g. in valleys of Biebrza and Narew (Dyrzcz et al. 1984, Domaszewicz and Lewartowski 1973). In many localities a rapid decrease has been observed.

**Great Snipe.** In the 19th century widespread but scarce in the whole country. Now its population is estimated at 550-600 displaying birds (Tomialojc in press), of which as many as 370 were recorded in the Biebrza Marshes (Dyrzcz et al. 1984). Other important breeding sites are in the middle Narew and Bug rivers and in the Lublin province. Very rarely breeds in central Poland along middle Warta. Now extinct in other parts of the country.

**Woodcock.** Widespread but scarce breeding species both in the lowlands, and in lower mountains at elevations up to 1000 m above sea level. More numerous locally in some swampy forests of northern and eastern Poland.

**Black-tailed Godwit.** Breeds in lowlands of the whole country, but distributed unevenly. Comparatively scarce in south-western and north-western Poland. Most numerous in swampy valleys of big rivers: c. 1000 pairs breed in the Biebrza Marshes, similar numbers along Narew and Bzura rivers (Dyrzcz et al. 1984, Lewartowski and Pugaczewicz, after Tomialojc in press, Markowski and Wojciechowski in press), and c. 500 pairs in the middle Warta section (Winięcki 1982, Lewartowski and Chylarecki after Tomialojc in press). The number for the whole country is estimated at more than 7000 pairs (Tomialojc in press).

**Curlew.** A total of about 400 pairs is reported for the country by Tomialojc (in press). Most important breeding sites are the Notec valley (c. 150 pairs (Bednorz after Tomialojc in press)), the Biebrza Marshes (50-75 pairs (Dyrzcz et al. 1984)) and Leczna-Włodawa Lake Districts (35-40 pairs (Dyrzcz et al. 1973)). In some provinces, e.g. in Silesia and on the Baltic coast in Pomerania, there has been a conspicuous decline in the numbers recorded (Gorski 1976, Bednorz 1983).

**Redshank.** Breeding in the whole lowland, but in some regions clearly decreasing in number. There is a total of 1100-1400 pairs in Poland (Tomialojc in press). It is most numerous in the Biebrza Marshes and in the Narew valley (c. 200 pairs in each), and also in the middle courses of Warta and Pilica rivers, and in southern Poland in the valley of the upper Vistula and around the Goczałkowice Reservoir.

**Wood Sandpiper.** Formerly bred almost throughout the whole lowlands, but breeding was not confirmed after 1945 for a long time. Former breeding sites of Wolin Island, Lebsko Lake, Gorki Wschodnie near Gdansk and Biebrza Marshes appear to be deserted now (Tomialojc 1972). However, since 1981 breeding birds have been seen in each year on the Bielawskie Bog: displaying birds, nest with eggs and juveniles recorded (M. Gromadzki pers. comm.). It is estimated that several pairs of Wood Sandpiper breed there.

**Green Sandpiper.** Occurs in the whole lowlands but scarce almost everywhere. However in some regions of northern and eastern Poland it still remains fairly numerous (e.g. in Białowieża Forest, Augustów Forest, Biebrza Marshes, Lublin Province). In western Poland there is a marked decrease in number (Tomialojc in press).

**Common Sandpiper.** Widespread but scarce breeding species in the whole country. Most numerous in Pomerania, while on big rivers it is a scarce breeding species. Extremely rare in Silesia (Tomialojc in press).

#### ACKNOWLEDGEMENTS

We are most grateful to Kees Rappoldt and Nick Davidson for their helpful suggestions in preparing this paper.

#### REFERENCES

Most of the publications listed below refer to a specific area in the list above. They are mainly in Polish, with summaries only in English. The address of the authors of these publications are given below the reference list.

Bednorz, J. 1972. W sprawie ochrony ptaków na polwyspie Row na wyspie Wolin. [Notes on

- the protection of birds on the Row peninsula of the Wolin Island.] *Chronmy przyr. ojcz.* 28(4): 12-20.
- Bednorz, J. 1976. Ptaki wodne i błotne zagospodarowanych iak zalewowych w dolinie Warty kolo Poznania. [Water- and wading-birds of former flooded meadows in a valley of the Warta River near Poznan.] *Pr. Uniw. A.M. Poznan, ser. zool.* 5: 1-77.
- Bednorz, J. 1983. Awifauna Słowinskiego Parku Narodowego z uwzględnieniem stosunkow ilosciowych. [Avifauna of Słowinski National Park with the consideration of quantitative relations.] *Prace Kom. Biol. PTPN* 65: 1-101.
- Domaszewicz, A. & Lewartowski, Z. 1973. Obserwacje awifauny rzeki Narwi i jej doliny. [Observations on the avifauna of Narew River and its valley.] *Not. przyr.* 7, 10: 3-36.
- Dyrzcz, A., Okulewicz, J., Tomialojc, L. & Witkowski, J. 1972. Ptaki Bagien Biebrzanskich i okolic w okresie legowym. [Breeding avifauna of the Biebrza Marshes and adjacent territories.] *Acta orn.* 13: 343-422.
- Dyrzcz, A., Okulewicz, J., & Wiatr, B. 1973. Ptaki Pojezierza Leczynsko-Włodawskiego w okresie legowym. [Birds breeding in the Leczna-Włodawa Lake Districts.] *Acta zool. cracov.* 18: 399-473.
- Dyrzcz, A., Okulewicz, J., Witkowski, J., Jesionowski, J., Nawrocki, P. & Winięcki, A. 1984. Ptaki torfowisk niskich Kotliny Biebrzanskiej. Opracowanie faunistyczne. [Birds of fens in Biebrza Marshes. Faunistic approach.] *Acta orn.* 20: 1-108.
- Gorski, W. 1976. Ptaki legowe pobraza Baltyku miedzy Mielnem a Ustka w latach 1965-1975. [Breeding birds of Baltic coast between Mielno and Ustka in years 1965-1975.] *Not. orn.* 17(1-2): 1-34.
- Gromadzka, J. 1981. Results of twenty years of wader ringing at the mouth of the Vistula in Poland. *Wader Study Group Bull.* 32: 23-24.
- Gromadzka, J. 1983. Rozmieszczenie legowisk i liczebność biegusa zmiennego (*Calidris alpina schinzii*) na południowym wybrzeżu Baltyku. [Distribution of breeding sites and numbers of southern Dunlin (*Calidris alpina schinzii*) on southern Baltic coast.] *Not. orn.* 24 (1-2): 31-36.
- Gromadzki, M. in press. Some problems of wetland protection in northern Poland. *Var Fagel*.
- Jakuczun, B. 1980. Stanowiska legowe ostrygojada *Haematopus ostralegus* w delcie Starej Swiny. [Breeding localities of the oystercatcher *Haematopus ostralegus* in the Old Swina delta.] *Chronmy przyr. ojcz.* 36(4): 71-73.
- Krol, E. 1982. Population study of Dunlin *Calidris alpina schinzii* near Gdansk, Poland - preliminary results. Abstract XVII Int. Congr. Ornithol. Moskwa. Moskva.
- Krol, E. in press a. Coastal meadows in Poland - the vanishing breeding wader habitat. General characteristic. *Var Fagel*.
- Krol, E. in press b. Numbers, reproduction and breeding behaviour of Dunlin *Calidris alpina schinzii* at the Reda mouth, Poland. *Acta orn.* 21.
- Majewski, P. 1983. Evaluation of the role of the Slonsk Reserve (poland) for waterfowl. *Acta orn.* 19: 227-235.
- Markowski, J. & Wojciechowski, Z. 1984. Rzadkie gatunki ptakow stwierdzone w srodkowej Polsce. [Rare bird species observed in the middle part of Poland.] *Not. orn.* 25(1-4): 15-24.
- Nawrocki, P., Jermaczek, A., Jesionowski, J., Nawrocka, B. & Winięcki, A. 1983. Ptaki Bagien Kramskich w okresie legowym w latach 1976-1979. [Birds of Kramskie Marshes during the breeding period in the years 1976-1979.] *Prace Kom. Biol. PTPN* 67: 19-41.
- Nowysz, W. & Wesolowski, T. 1972. Ptaki Kostrzynskiego zbiornika retencyjnego i okolic w sezonie legowym. [The birds of Kostrzyn retention reservoir and its environs in the breeding season.] *Not. przyr.* 6(8): 4-31.
- Nowysz, W. & Wesolowski, T. 1973. Materiały do awifauny doliny Noteci. [Contribution to the avifauna of Notec river valley.] *Not. przyr.* 7(10): 37-48.
- Tomialojc, L. 1972. Ptaki Polski. Wykaz gatunkow i rozmieszczenie. [Birds of Poland. A list of species and their distribution.] Warszawa.
- Tomialojc, L. in press. Ptaki Polski. Rozmieszczenie i liczebność. [Birds of Poland. Their distribution and abundance. 2nd edition.]
- Wesolowski, T., Glazewska, E., Glazewski, L., Nawrocka, B., Nawrocki, P. & Okonska, K. 1984. Rozmieszczenie i liczebność ptakow siewkowatych, mew i rybitw gniazdujących na wyspach Wisly srodkowej. [Distribution and numbers of waders, gulls and terns nesting in the middle course of Vistula.] *Acta orn.* 20: 159-185.
- Winięcki, A. 1983. Ekologia i fenologia ptakow wodnych i błotnych zalewowych pastwisk w dolinie srodkowej Warty. [Ecology and phenology of water and wading birds of water-pastures in the valley of middle Warta River.] *Prace Kom. Biol. PTPN* 67: 19-41.

## ADDRESSES OF AUTHORS OF PUBLICATIONS

- Dr. Jan Bednorz, Zakład Zoologii Ogólnej UAM, (Department of General Zoology, Poznan University), Fredry 10, 61-701 Poznan.
- Prof. Andrzej Dyrzcz, Zakład Ekologii Ptakow U.Wr. (Department of Bird Ecology, Wrocław University), Sienkiewicza 21, 50-335 Wrocław.
- Dr. Wojciech Gorski, Zakład Zoologii WSP (Department of Zoology, Ped. Col.), Arciszewskiego 22, 76-200 Slupsk.
- Dr. Jadwiga Gromadzka, Stacja Ornitologiczna IZ PAN (Ornithological Station, Institute of Zoology Polish Academy of Sciences), Nadwislanska 108, 80-680 Gdansk 40.
- Dr. Maciej Gromadzki, Stacja Ornitologiczna IZ PAN (Ornithological Station, Institute of Zoology, Polish Academy of Sciences), Nadwislanska 108, 80-680 Gdansk 40.
- Bogdan Jakuczun, Niepodleglosci 3, 72-610 Miedzyszroje.
- Elzbieta Krol, Stacja Ornitologiczna IZ PAN (Ornithological Station, Institute of Zoology Polish Academy of Sciences), Nadwislanska 108, 80-680 Gdansk 40.
- Zenon Lewartowski, Zielonogorska 3, 62-300 Wrzesnia.
- Dr. Przemyslaw Majewski, Stacja Badawcza PZL (Research Station of Polish Hunting Association), 64-020 Czempin.
- Przemyslaw Nawrocki, Muzeum Okregowe, Nowotki 12, 26-600 Radom.
- Dr. Ludwik Tomialojc, Muzeum Przyrodnicze U.Wr. (Museum of Natural History, Wrocław University), Sienkiewicza 21, 50-335 Wrocław.
- Dr. Tomasz Wesolowski, Zakład Ekologii Ptakow U.Wr. (Department of Bird Ecology, Wrocław University), Sienkiewicza 21, 50-335 Wrocław.
- Aleksander Winięcki, Zakład Zoologii Systematycznej UAM (Department of Systematic Zoology, Poznan University), Fredry 10, 61-701, Poznan.
- Dr. Zbigniew Wojciechowski, Krasnoludkow 7, 91-504 Lodz.

J. Gromadzka, Ornithological Station, Nadwislanska 108, 80-680 Gdansk 40, Poland.  
T. Stawarczyk and L. Tomialojc, Museum of Natural History, Wrocław University, Sienkiewicza 21, 50-335 Wrocław, Poland.