

GEESE WINTERING IN POLAND

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Foreword

Information about migrations of wild geese on the Polish territory, its intensity and about geese wintering in Poland that has been gathered so far tends to be rather fragmental or very general. Spring migrations take place in February and March, autumn migrations from September till December. Some geese winter in Poland. The most intense migrations have been recorded along the Baltic Sea coast and in northern and western parts of Poland. In the coastal region the White-fronted goose dominates among migrating geese, in the other regions the Bean goose prevails (*Korsak, 1948; Sokolowski, 1958; Mierzewski, 1959, 1960; Niewagłowski, 1959; Szczepkowski, 1962; Mrugasiewicz, 1964; Dzieciolowski—Frankiewicz, 1970; Hudec—Rooth, 1970; Nowysz—Wesołowski, 1972; Tomialojc, 1972; Fruziński B. 1973; Bobinski—Taylor, 1977; Dudziński, 1977; Ferens—Walsiewski, 1977*).

Since 1967, when the Winter Waterfowl Counting Action begun, research on quantity of migrating and wintering geese has been carried on. The annual reports were presented (*Wolk—Pinowski—Nowak, 1966; Wolk, 1968; Nowak, B.—Nowak, E., 1969; Nowak, E.—Solinski, 1969; Krzyskowiak—Nowak, E., 1970, 1971, 1971a, 1972, 1973, 1973a, 1974, 1974a, 1975; Krzyskowiak—Dobrowolski, 1976, 1976a, 1977, 1977a; Dobrowolski—Krzyskowiak, 1979, 1980*).

This paper is an approach to define the data on disposition and concentration of migrating and wintering geese in Poland in the period of 1970—1980, basing on the detailed material gathered on the course of the action.

In some aspects, information obtained during winter counting in 1969 was also included.

The Method and The Material Used

The data was obtained through the question forms that were sent to constant observers who volunteered to take part in the action. They were mostly hunters, amateur bird-watchers, university workers and teachers, high school pupils. The forms were originally sent in mid-January, then in mid-November and mid-January, and for the last five years in the middle of November, January and March (Tabl. 1.). All the observations were taken during one week in the middle of the month.

Basing on the analysis of the ratio of the total number of points under investigation (in every month) to the points from where the information on geese was obtained and the points with no waterfowl at all (ratio of the numbers in position 2 to positions 3 and 4 in the Table 1), we claim to have collected suf-

Tab. 1.

Number of observers, points under investigation, places where geese were found, places with no waterfowl

Year	November				January				March			
	Observers	Places of control	Places where geese were found	Places without any birds	Observers	Places of control	Places where geese were found	Places without any birds	Observers	Places of control	Places where geese were found	Places without any birds
1969					301	336	18	58				
1970	420	419	91	11	252	254	6	61				
1971	364	365	61	12	384	381	20	80				
1972	306	319	67	9	329	332	26	70				
1973	301	302	61	1	295	311	28	42				
1974	287	279	68	13	293	291	28	31				
1975	265	258	56	1	263	268	46	14				
1976	232	229	54	1	251	244	19	19	252	245	36	19
1977	199	198	37	3	213	212	17	35	229	228	60	6
1978	202	204	44	1	214	214	18	23	179	177	36	8
1979	230	222	40	3	244	247	12	50	203	205	36	15
1980					226	219	19	30	209	203	35	12

ficiently representative material. The average of this ratio taken for 10 years in November is as follows: geese were recorded in 20.7% points controlled, no birds recorded in 2% points. In January (average from 12 years) geese were recorded in 7.8% points, no birds recorded in 15.5% points. In March (average from 5 years) respectively 19.2% and 5.7%.

The ratio of the number of points where geese were recorded or with no waterfowl at all to the number of all points investigated, taken per cent, was similar in each month and equaled 22.7% in November, 23.3% in January and 24.8% in March. The network of observers covers Poland rather regularly, although some territories in northwestern and southern parts of the country remain uncovered. To elaborate the data on concentration and disposition of geese, a network of 50 × 50 km squares was adopted. Though the observers are distributed throughout the country rather regularly, number of points under observation differs in different squares, and there are also some squares with no observation points. The proportion of the number of squares containing points of observation to all the squares covering Poland, taken per cent, differs in different years and months from 59.6% to 82.8%. It must not be forgotten, though, that the squares without observation points lay mainly in mountain and submountain areas and some of them cover only a small part of Polish territory, laying on the frontiers. Out of 151 squares covering Poland 52 lay on the borders. When these are not considered, the squares containing observation points constitute 72.7 to 81.8% of the total number. Some of the squares without observation points cover areas with almost no wetland.

No distinction between the species was made in the analysis of the results. While the numeral quantity of birds can be relied upon, the numbers of particular species are in many cases very uncertain. Excluding these cases would restrict the material considerably. Thus we decided to elaborate common data for all the species of geese appearing in Poland, i. e. *Anser anser* (L.) (the only nesting species), *Anser fabalis* (Lath.) *Anser albifrons* (Scop.), *Anser erythropus* (L.).

Tab. 2.

*Amounts of geese recorded in Poland in the middle
of November, January and March*

Year	November			January			March		
	Σkm	Σha	Number of geese	Σkm	Σha	Number of geese	Σkm	Σha	Number of geese
1969				155	463	880			
1970	712	13 853	9 876	47	450	99			
1971	445	10 661	8 472	166	5 453	933			
1972	603	18 801	9 023	215	3 816	5 941			
1973	465	13 508	3 624	234	9 201	8 019			
1974	512	12 514	4 786	216	978	1 598			
1975	432	11 515	7 246	372	8 964	4 952			
1976	423	15 609	6 402	162	4 997	3 540	258	6 703	4 176
1977	271	11 225	7 153	122	3 271	1 412	434	16 295	6 568
1978	331	10 148	6 714	151	2 604	1 236	292	7 691	2 258
1979	324	8 950	7 042	116	2 854	1 263	267	5 747	2 356
1980				145	3 972	867	309	5 819	4 198

The amounts of geese observed are given in the Tabl. 2, and actual points of observation in Tabl. 3. The data transposed onto the square network were considered in two five-years periods for November (1970—1974 and 1975—1979) and January (1971—1975 and 1976—1980) and in one five-years period for March (1976—1980). This arrangement of results provides more regular coverage by observation points in particular squares and reduces the number of squares without observation points.

The primary analysis of frequency of concentrations of over 1000 individuals at one point in particular years and months was an argument to prove this indicator was chosen correctly. The frequency proved to be similar:

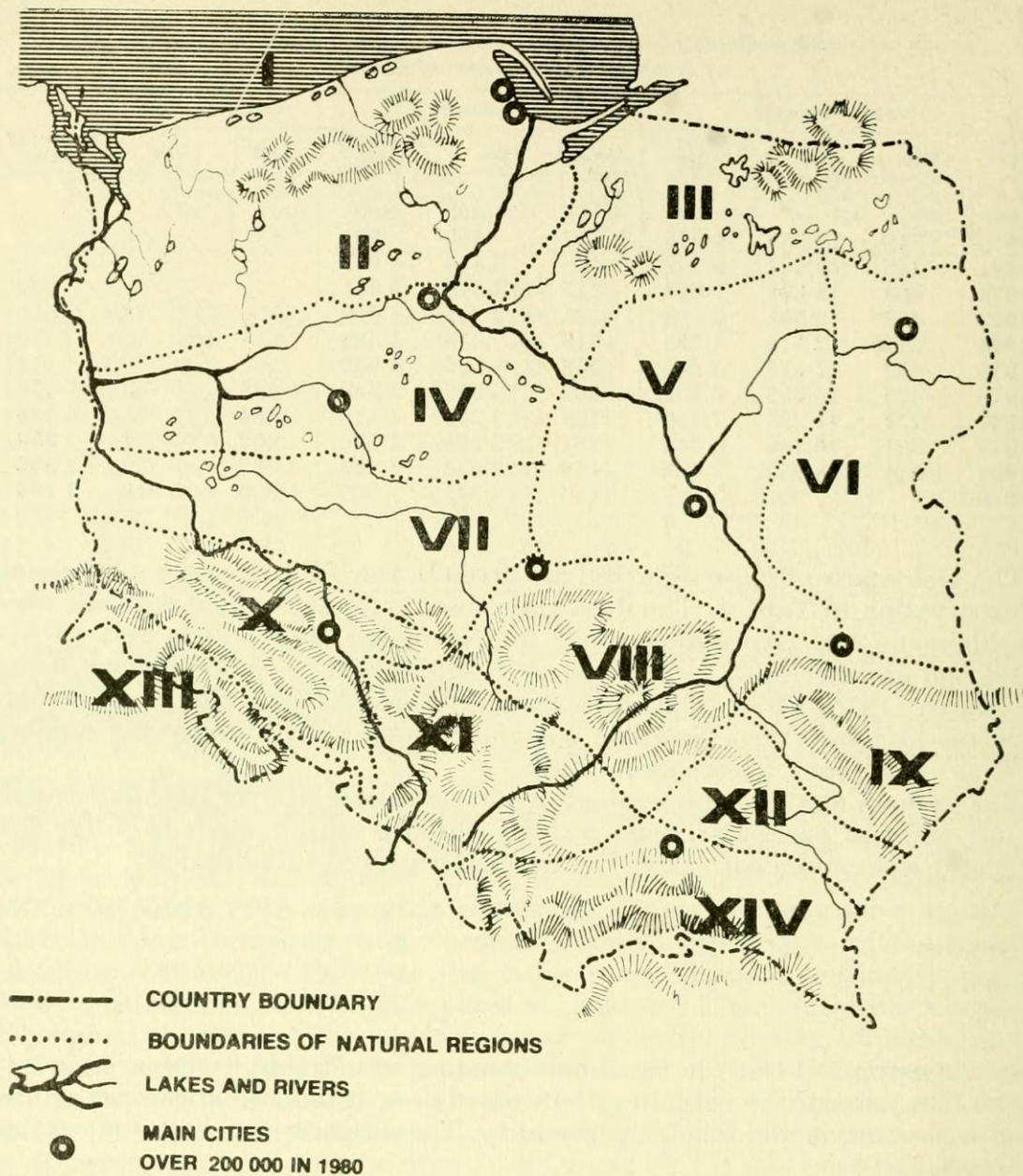
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
November	4	1	2	2	2	2	2	3	2	3	—
January	—	0	1	1	2	1	1	0	0	0	0
March	—	—	—	—	—	—	2	1	0	1	1

It was estimated that the maximal amount of individuals observed in any of the five years of the period can be treated as a sufficient indicator of wintering concentration and migration intensity. These figures are shown on synthetic maps.

The occurrence of geese was also confronted with the division of Poland into Natural Regions (Fig. 1.). This division is based on printed sources (*Mroczkiewicz*, 1952; *The Atlas of Poland*, 1954; *Kostrowicki*, 1961; *Mroczkiewicz—Trampler*, 1964; *Berger—Jaskowska—Mlynarski*, 1969; *Koehler*, 1971; *Leszczynski*, 1980). Although the division suggested in this paper is based chiefly on the factors being of importance for waterfowl, it does not differ considerably from the division proposed by Poland's fauna catalogue, (1969).

The analysis of distribution of winter concentration points and intensity of migrations as compared to the Natural Regions was made on 10-years periods for November and January and on a 5-years period for March.

The relation between the number of wintering geese and climatic conditions (snow cover, temperature) was also analysed. In this aspect the data from



AN ARROW SHOWS
 THE KOSTRZYN
 RESERVOIRE

1. Division of Poland into Natural Regions. I — The Baltic Sea, II. — Pomeranian Lake District, III — Masurian Lake District, IV — Wielkopolska ("Grand Poland") Lake District, V — Masovian Lowland, VI — Podlasie Lowland, VII — Wielkopolska ("Grand Poland") Lowland, VIII — Malopolska ("Lesser Poland") Highland, IX — Lublin and Roztocze Highlands, X — Silesian Lowland and the Trzebnica Ridge, XI — Silesian and Cracow—Czestochowa Highlands, XII — Sandomierz Dale, XIII — The Sudety Mts., XIV — The Beskidy Mts. (part of the Carpathians)

Month: November

Year: 1970

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Bialostockie	11	15	60	r. Krasna, n. t. Krasne, r. Suprasl, ch. v. Zielona — t. Krasne
Bydgoskie	9	—	72	r. Gasawka, t. Znin — v. Sobiejuchy, l. Zninskie Duze, l. Dobrylewskie, l. Sobiojuskie
Bydgoskie	3	303	9	r. Welna, n. t. Rogów
Chelmskie	11	31	22	r. Piwonia, v. Komarówka — v. Sosnowica, l. Komarowskie, p. n. v. Górki
Chelmskie	—	320	7	a. l. Zahajki, n. t. Wlodawa
Chelmskie	—	20	5	s. n. t. Chelm Lubelski
Chelmskie	4	—	43	r. Udal, n. t. Chelm Lubelski
Gdanskie	3	—	20	s. c. v. Brzezno — v. Jelitkowo
Gorzowskie	5	600	200	r. Mysla, t. Myslibórz — v. Mysliborzyce, l. Mysliborskie
Gorzowskie	11	10	42	r. Mysla, v. Staw — v. Lubiszyn l. Sciechów, l. Wysoka, n. v. Sciechów
Gorzowskie	—	40	7	l. Wierzbniekie, n. t. Myslibórz
Gorzowskie	—	120	7	l. Stawin, l. Klukom, l. Radun n. t. Choszczno
Gorzowskie	—	40	52	l. Trzecie, n. t. Choszczno
Gorzowskie	15	1300	530	r. Warta, n. t. Kostrzyn, r. a. ch. n. t. Kostrzyn
Gorzowskie	6	400	500	r. Warta, n. t. Kostrzyn, r. a. n. t. Kostrzyn
Gorzowskie	—	5100	2862	a. l. n. v. Slonsk, Kostrzynski Zbiornik Retencyjny .
Gorzowskie	7	—	1000	r. Notec, v. Santoki — v. Lipki Male
Gorzowskie	—	340	290	l. Lubikowskie, n. v. Lubikowo
Gorzowskie	—	121	7	l. Glebokie, n. t. Miedzyrzecz
Gorzowskie	8	—	40	r. Warta, v. Czechów — v. Santok
Kaliskie	15	—	75	r. Prosna, v. Lisewo — v. Ruda
Kaliskie	10	—	60	r. Czarna Woda, n. v. Gorzupia
Katowickie	11	—	11	r. Odra, v. Ligota — t. Racibórz
Katowickie	17	—	9	r. Wisla, v. Wola — v. Rudawka
Kieleckie	45	20	12	r. Kamienna t. Skarzysko Kamienna — t. Ostrowiec, p. n. t. Starachowice, p. n. t. Brody Ilzeckie
Kieleckie	15	150	2	r. Nida, v. Wislica — v. Nowy Korczyn, s. r. a.
Kieleckie	—	20	12	r. a. n. v. Czarkowy
Koninskie	6	26	313	r. Warta, n. v. Pietrzyków, a. l. Wrzesnia, n. v. Borzyków
Koninskie	10	15	160	r. Warta, n. v. Patrzyków

1	2	3	4	5
Koszalinskie	2	—	30	s. c. t. Kolobrzeg — v. Morskie Oko
Krosnienskie	10	—	1	r. Wisłoka, n. v. Brzostek
Legnickie	9	—	28	r. Cicha Woda, v. Ruja — v. Tyniec Legnicki
Leszczynskie	7	—	110	r. Obra, n. t. Koscian
Leszczynskie	9	10	38	r. Obra, n. t. Koscian
Leszczynskie	10	—	43	r. Barycz, ch. Slaski, n. v. Niechlów
Lubelskie	6	30	150	r. Minina, v. Samokleski — v. Kierzkówka, p. n. v. Samokleski
Lomzynskie		4	4	l. Rajgrodzkie, n. t. Rajgród
Olsztynskie	10	170	12	r. Ilawka, l. Jaziorak — l. Dół, l. Labadz, l. Dół
Olsztynskie	9	—	29	r. Drweca, n. v. Samplawa
Olsztynskie	6	82	3	l. n. v. Wyzegi
Opolskie	6	—	11	r. Odra, n. t. Opole
Opolskie	8	—	5	r. Odra, v. Dziegowice — v. Bierawa
Ostroleckie	6	—	32	r. Bug, v. Rostki — v. Gasiorowo
Pilskie	18	213	1	r. Notec, n. t. Chodziej, l. Miejskie, l. Karzewnik, l. Strzeleckie
Pilskie	10	—	32	r. Gwda, v. Kalina — v. Gily
Pilskie	18	—	23	r. Notec, n. v. Lipia Góra
Pilskie	—	310	6	l. Kopecze, L. — Siekiera, l. Margolinskie, n. t. Chodziej
Pilskie	10	—	5	r. Notec, v. Czarnków — Gulez
Pilskie	10	—	73	r. Notec, v. Wielen — v. Rosko
Piotrkowskie	18	50	9	r. Czarna, n. v. Zarnów
Piotrkowskie	12	—	3	r. Pilica, t. Tomaszów Maz. — v. Jarzab
Piotrkowskie	15	—	1	r. Pilica, r. Wolbórka, r. Czarna, n. v. Spala
Plockie	10	20	9	r. Skrwa, n. t. Sierpe
Poznanskie	—	245	35	l. Niepruszewo, p. n. v. Otusz
Poznanskie	6	—	13	r. Warta, t. Poznan — t. Czerwonak
Poznanskie	10	—	4	r. Warta, v. Puszczykowo — v. Rogalin
Poznanskie	8	—	7	r. Warta, v. Rogalin — v. Radzewice
Siedleckie	6	30	2	r. Zbuczynka, p. n. v. Zbuczyn
Sieradzkie	8	—	17	r. Warta, v. Balin — v. Ksieze Mlyny
Sieradzkie	10	—	92	r. Warta, v. Warta — v. Peczniew
Sieradzkie	9	—	23	r. Warta, v. Zaspas — v. Zakrzew
Sieradzkie	7	13	9	r. Grabia, v. Kustrzyce — v. Kozuby, p. n. v. Marzynek
Sieradzkie	16	—	7	r. Warta, v. Przywóz — v. Jarzebie
Skierniewickie	10	—	1	r. Bzurna, n. v. Brochów
Slupskie	19	—	1	r. Wieprza, v. Stary Kraków — t. Darlowo
Slupskie	12	—	1	r. Biala, v. Jeziernik — v. Miedzybórz
Slupskie	3	—	9	r. Brda, n. v. Rudniki

1	2	3	4	5
Slupskie	—	20	4	l. Krepsko, n. v. Krepsk
Suwalskie	12	150	21	r. Czarna Hancza, t. Suwalki — v. Sobolewo, l. Garbas, l. Osowa
Suwalskie	—	100	32	l. Nidzkie
Szczecinskie	5	16	32	r. Rega, v. Klodkowo — t. Trzebia-tów
Szczecinskie	—	40	150	r. Liwia, n. v. Niechorze
Szczecinskie	3	2	7	r. n. v. Wicimice
Szczecinskie	—	10	64	r. a. Odra, r. a. Regalica, n. t. Szczecin
Szczecinskie	10	—	1350	r. Ina, v. Suchan — v. Krapiel
Szczecinskie	11	112	7	r. Krepa, l. n. v. Marianowo
Szczecinskie	18	305	930	r. Tywa, n. t. Trzcinsko Zdrój, l. Swobnica, l. Grzybno, l. Klasztorne
Szczecinskie	5	140	6	r. Tywa, v. Lubanowo — v. Banie, l. Swiete, l. Male, l. Dlugie
Tarnowskie	10	—	4	r. Wisla, n. v. Szezucin
Tarnowskie	—	270	1	r. Dunajec, n. v. Zakliczyn, l. n. v. Czechów
Tarnowskie	10	—	2	r. Wisloka, t. Debica — v. Podgro-dzie
Torunskie	3	100	17	r. Gardeja, l. Nogat — v. Szembruk, l. Nogat
Wloclawskie	10	—	3	ch. Bachorze, v. Ujma Duza — v. Sedzin
Wroclawskie	15	1200	467	r. Barycz, v. Gadkowice — t. Milicz, p. n. t. Milicz
Wroclawskie	—	420	25	p. v. Goszcz, n. t. Milicz
Zamajskie	22	—	1	r. Tanew, v. Ksiezpol — v. Harasiuki
Zielonogórskie	—	200	67	p. n. v. Radomiczko
Zielonogórskie	—	180	387	l. Strózka, n. v. Górzyn
Zielonogórskie	9	—	27	r. Odra, n. v. Miedzylesie
Zielonogórskie	4	520	92	r. Dojea, n. t. Wolsztyn, l. Wolsz-tynskie, l. Berzynie

Month: November

Year: 1971

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
Bydgoskie	9	27	24	r. Gasawka, t. Znin — v. Sobiejuchy, l. Zninskie, l. Dobrylewo, r. Piwonia, v. Komarówka — v. Sosnowica, l. Komarowskie
Chelmskie	5	75	22	p. n. v. Górki
Czestochowskie	11	36	1	r. Liswarta, n. v. Hadra
Gdanskie	5	—	4	s. c. Zatoka Pucka, n. v. Rzucewo
Gdanskie	8	—	3	r. Reda, v. Reda — t. Wejcherowo
Gorzowskie	6	650	80	r. Mysla, n. t. Myslibórz, l. Mysli-borskie

1	2	3	4	5
Gorzowskie	10	—	47	r. Mysla, v. Staw — v. Lubiszyn
Gorzowskie	—	3	3	r. Plonia, n. v. Barlinek, l. Barliniec- kie
Gorzowskie	10	—	6000	r. Warta, r. a. Warta, n. t. Kostrzyn
Gorzowskie	—	40	180	l. Lubikowo, n. t. Miedzyrzecz
Gorzowskie	—	121	6	l. Glebokie, n. t. Miedzyrzecz
Kaliskie	10	—	2	r. Prosna, v. Gizalki — v. Chocz
Kaliskie	7	—	7	s. n. v. Gorzupia
Katowickie	17	50	12	r. Odra, n. t. Racibórz, p. t. Wodzis- law
Katowickie	24	—	9	r. Wisla, t. Pszczyna — v. Wola
Kieleckie	10	—	7	r. v. Jasice — v. Mikulowice
Kieleckie	15	—	5	r. Nida, v. Wislica — v. Czerkawy
Koninskie	7	—	43	r. Warta, n. t. Pyzdry
Koninskie	10	—	12	r. Warta, v. Krzymów — v. Wola Podlezna
Koninskie	5	—	30	r. Warta, n. t. Kolo
Leszczyńskie	6	—	36	r. Obra, n. t. Koscian, ch. Kanal Kpscianski
Leszczyńskie	15	—	7	r. Obra, v. Niedzwiady — v. Stud- zianne
Leszczyńskie	10	—	7	r. Barycz, v. Niechlów — v. Góra, r. Rów Śląski, n. v. Góra
Olsztynskie	5	150	137	r. Sapina, r. Wegorapa, n. t. Wegor- zewo, l. Mamry, l. Swieczajty, l. Romint
Olsztynskie	6	—	30	r. Lyna, t. Olsztyn — v. Bartag
Opolskie	12	—	3	r. Odra, n. t. Opole
Opolskie	28	8	18	r. Odra, t. Opole — t. Krapkowice
Opolskie	13	—	30	r. Odra, t. Krapkowice — v. Krepna
Ostroleckie	4	—	4	r. Orzye, r. Róż, n. t. Maków Mazo- wiecki
Pilskie	—	2000	30	l. Tuczno, l. Peno, l. Bochenskie, l. Zamkowe, l. Milogoszcz, n. v. Tuczno
Pilskie	10	—	3	r. Notec, v. Czarnków — v. Gulcz.
Piotrkowskie	14	6	42	r. Grabia, v. Grabica — v. Druzbiec, p. v. Krzepezów
Piotrkowskie	10	3	12	r. Grabia, n. v. Lutoslawice, p. n. v. Dziwle, Grabia, Wdowin
Piotrkowskie	12	—	3	r. Pilica, t. Tomaszów Maz. — v. Spala
Piotrkowskie	15	—	1	r. Pilica, n. t. Tomaszów Maz.
Plockie	—	20	6	s. p. n. t. Kutno
Poznanskie	4	358	16	l. Niepruszewskie, p. n. t. Poznan
Poznanskie	7	—	15	r. n. t. Gniezno
Poznanskie	3	8	5	r. Dojea, n. v. Wolsztyn, l. Kuznickie
Siedleckie	10	10	5	r. Zbuczynka, n. v. Zbuczyn
Sieradzkie	5	—	16	r. Warta, n. v. Jeziorsko
Slupskie	—	10	4	l. Glebokie, n. v. Miastko

1	2	3	4	5
Szczecinskie	3	—	45	s. c. Zalew Szczecinski, n. t. Goleniów
Szczecinskie	7	38	400	r. Rega, n. t. Trzebiatów, l. Trzyglów
Szczecinskie	—	40	40	l. Liwia Luza, n. v. Niechorze
Szczecinskie	—	100	145	r. a. Odra, r. a. Regalica, n. t. Szczecin
Szczecinskie	19	850	74	r. Pezinka, r. Krapiel, l. Marianowo, l. Pezinskie, n. t. Stargard Szczecinski
Szczecinskie	7	—	2	r. Ina, n. t. Stargard Szczecinski
Szczecinskie	13	—	583	l. Chojno, n. v. Trzeczno Zdrój
Tarnowskie	—	270	5	r. Dunajec, n. v. Zakliczyn, l. n. v. Czechów
Torunskie	12	88	10	r. Drweca, n. v. Mlyniec, l. Okonin
Wloclawskie	—	652	18	l. Gluszczyńskie
Wroclawskie	9	2500	132	r. Barycz, n. v. Zmigród, p. n. v. Radziadz, p. n. v. Ruda Sulowska
Wroclawskie	11	1300	231	r. Barycz, n. t. Milicz, p. n. t. Milicz
Wroclawskie	—	150	7	p. Goszcz, n. t. Milicz
Wroclawskie	—	780	1	p. Potasznia, n. v. Cieszków
Wroclawskie	5	—	9	r. Odra, n. t. Brzeg Dolny
Zielonogórskie	—	348	20	r. Dojca, n. v. Wolsztyn, l. Berzyskie, n. v. Wolsztyn
Zielonogórskie	15	—	80	r. Odra, n. v. Czerwiensk
Zielonogórskie	3	—	7	r. Nysa Luzycka, n. v. Zasieki
Zielonogórskie	—	20	26	p. n. v. Kozuchów

Month: November

Year: 1972

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Bydgoskie	8	4	1	r. Notec, n. t. Szubin, p. n. t. Szubin
Bydgoskie	9	253	8	r. Gasawka, t. Znin — v. Sobiejuchy, l. Zninskie Duze, l. Dobrylewskie
Bydgoskie	6	80	5	l. Chmielniki, n. v. Nowa Wies Wielka, ch. Kanal Chmielniki
Bydgoskie	—	750	49	l. Gopla, n. t. Kruszewica
Chelmskie	13	31	11	r. Piwonia, n. v. Górki, l. Komarowskie
Gdanskie	5	—	10	s. c. t. Puck — v. Rzucewo
Gdanskie	2	—	4	r. Wisla, n. t. Teczew
Gorzowskie	5	600	114	r. Mysla, n. t. Myslibórz, l. Mysliborskie
Gorzowskie	5	1300	5430	r. Warta, n. t. Kostrzyn, ch. r. a. n. t. Kostrzyn
Gorzowskie	6	—	18	r. Warta, n. t. Kostrzyn
Gorzowskie	—	121	9	l. Glebokie, n. t. Miedzyrzecz
Jeleniogórskie	8	5000	9	r. Bober, n. t. Lwówek Slaski
Kaliskie	8	1	20	s. n. v. Gorzupia

1	2	3	4	5
Kaliskie	9	—	5	r. Prosna, n. t. Kalisz
Katowickie	11	—	47	r. Odra, n. t. Racibórz
Katowickie	—	300	6	p. Wielikat, n. t. Rybnik
Katowickie	10	—	12	r. Klodnica, n. t. Mikołów
Katowickie	20	—	9	r. Wisła, n. v. Goczalkowice
Koninskie	5	—	19	r. Warta, n. t. Pyzdry
Koninskie	8	500	93	r. Warta, r. a. Warta, r. Czarna Struga, n. v. Zagórów
Koninskie	10	—	32	r. Warta, n. v. Krzymów
Koninskie	8	—	14	r. Warta, n. v. Jeziorsko
Koszalinskie	3	—	30	s.c. n. t. Kolobrzeg
Krakowskie	10	10	3	r. Wisła, n. v. Wawrzencyce, p. n. v. Stare Wisłiska
Legnickie	8	—	41	r. Cicha Woda, n. v. Ruja
Leszczyńskie	7	450	6	r. Obra, n. t. Koscian. ch. Kanal Koscianski
Leszczyńskie	11	32	23	r. Barycz, n. v. Niechlów, r. a. Stara Barycz
Leszczyńskie	8	—	48	ch. Kanal Koscianski
Lomżyńskie	28	—	10	r. Elk. n. v. Ruda, ch. Kanal Rudzki
Nowosadeckie	6	50	8	r. Dunajec, n. t. Nowy Sacz, p. n. t. Nowy Sacz
Olsztynskie	6	280	14	r. Lyna, n. t. Olsztyn, l. Gim. n. v. Butryny
Opolskie	12	—	221	r. Nysa, n. t. Paczków
Opolskie	13	—	1	r. Osobloga, n. v. Głogówek
Pilskie	10	—	30	r. Notec, n. v. Rosko
Piotrowskie	12	—	2	r. Pilica, n. t. Tomaszów Maz.
Piotrowskie	15	—	2	r. Pilica, n. t. Tomaszów Maz.
Poznanskie	—	420	68	l. Niepruszewskie, n. t. Poznan
Poznanskie	17	—	7	r. Warta, n. t. Oborniki
Poznanskie	9	275	7	r. p. n. t. Gniezno
Poznanskie	6	700	4	r. Warta, n. t. Srem, p. n. t. Srem
Poznanskie	5	469	11	r. Warta, n. v. Puszczykowo, l. n. v. Puszczykowo
Radomskie	10	—	4	r. Pilica, n. v. Biała Góra
Sieradzkie	10	—	178	r. Warta, n. v. Warta
Ślupskie	5	—	1	r. Ślupia, n. t. Ślupsk
Ślupskie	—	60	38	l. Glebokie, n. v. Miastko
Suwalskie	27	1000	400	r. Węgorapa, n. t. Węgorzewo, l. Mamry, l. Oswin, l. Świecajty
Szczecińskie	6	6	18	r. Rega, r. Sarenka, n. t. Trzebiatów, p. n. v. Lewice
Szczecińskie	—	40	118	l. Liwia, n. t. Trzebiatów
Szczecińskie	3	90	60	s. c. Zalew Szczeciński, n. v. Zarnowo
Szczecińskie	10	—	178	r. Ina, n. t. Stargard Szczeciński
Szczecińskie	11	65	163	r. n. v. Trzcinsko-Zdrój, l. Grzybno
Szczecińskie	5	160	322	r. Tywa, n. v. Banie, l. Długie

1	2	3	4	5
Włocławskie	—	40	25	l. Nadróz, n. t. Rypin
Włocławskie	—	384	17	l. Gluszynskie, l. Sadluzek
Włocławskie	100	—	27	ch. Kanal Bachorze, n. t. Bydgoszcz
Włocławskie	12	—	6	r. Wisła, n. t. Włocławek
Wrocławskie	9	2000	106	r. Barycz, n. v. Zmigród, p. n. v. Radziadz, p. n. v. Ruda Sulowska
Wrocławskie	7	1800	445	r. Barycz, n. t. Milicz, p. n. t. Milicz
Wrocławskie	—	420	35	p. n. v. Goszcz, p. n. t. Milicz
Wrocławskie	—	780	300	p. n. v. Potasznia
Zamojskie	9	140	6	p. n. t. Tomaszów Lubelski
Zielonogórskie	—	7	182	ch. Kanal Północny Obry, n. v. Dabrowa Stara
Zielonogórskie	10	—	13	r. Odra, n. v. Cigacice
Zielonogórskie	—	183	12	l. Wilkowskie, n. t. Swiebodzin
Zielonogórskie	14	—	1589	r. Odra, n. v. Nietków
Zielonogórskie	3	—	3	r. Nysa Luzycka, n. v. Zasieki
Zielonogórskie	10	—	18	r. Bóbr, n. v. Krzystkowice

Month: November

Year: 1973

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Bydgoskie	—	800	5	l. Goplo, v. Przewóz — v. Kicko
Bydgoskie	—	600	1	l. Głopo. n. v. Jeziora Wlk.
Ciechanowskie	1	—	6	r. Lydynia, n. t. Ciechanów
Elblaskie	10	150	16	l. Dabrowka, n. t. Malbork, ch. Kanal Juranta
Elblaskie	3	—	1	r. Wisła, n. v. Ostaszewo
Gdanskie	10	—	6	s. c. v. Brzezno — t. Orłowo
Gdanskie	8	—	1	s. c. v. Chalupy — t. Władysławowo
Gorzowskie	5	600	18	r. Mysła, n. t. Myslibórz, l. Mysliborskie
Gorzowskie	14	—	12	r. Warta, n. t. Gorzów Wlkp.
Kaliskie	8	1	207	s. n. v. Gorzupia
Kaliskie	9	—	2	r. Prosna, n. t. Kalisz
Katowickie	11	—	14	r. Odra, n. t. Racibórz
Katowickie	20	—	19	r. Wisła, n. v. Góra
Kieleckie	20	—	7	r. Kamienna, n. t. Skarżysko Kamienna
Koninskie	6	110	18	r. Ner, n. t. Leczyca
Koninskie	5	—	16	r. Warta, n. t. Pyzdry
Koninskie	8	500	27	r. Warta, r. Czarna Struga, n. v. Zagórów
Koninskie	10	—	12	r. Warta, n. v. Krzymów
Koninskie	10	—	7	r. Warta, n. t. Konin
Legnickie	8	—	18	r. Cicha Woda, n. v. Ruja

1	2	3	4	5
Leszczynskie	8	—	16	ch. Kanal Koscianski Obry, n. t. Koscian
Lomzynskie	13	—	7	r. Elk, n. v. Ruda, ch. Kanal Rudzki
Olsztynskie	14	—	7	r. Lyna, n. t. Sepopol
Olsztynskie	6	280	1	r. Lyna, n. t. Olsztyn, l. Gim, n. v. Butryny
Oploskie	—	5	12	p. n. v. Prószków
Opolskie	12	—	135	r. Nysa Klodzka, n. a. l. Otmuchowskie
Opolskie	—	2000	350	a. l. Otmuchowskie
Pilskie	10	—	180	r. Notec, n. v. Rosko
Piotrkowskie	12	7	54	r. Grabia, n. v. Lutoslawice
Plockie	10	—	200	r. Ochnia, n. t. Kutno
Plockie	—	70	5	s. n. t. Kutno
Plockie	12	—	5	r. Studwia, n. t. Zychlin
Plockie	10	3000	1	r. Skrwa, n. t. Sierpe, s. n. t. Sierpe
Poznanskie	5	469	5	r. Warta, n. v. Puszczykowo
Poznanskie	18	—	6	r. Warta, n. t. Wronki
Poznanskie	6	21	12	r. Wrzesnica, n. v. Czerniejewo
Poznanskie	9	265	4	p. s. n. t. Gniezno
Sieradzkie	10	—	17	r. Warta, n. v. Warta
Sieradzkie	10	30	5	r. Warta, n. v. Osjaków
Slupskie	—	60	22	l. Glebokie, n. v. Miastko
Suwalskie	10	1000	1000	r. Wegerapa, n. t. Wegerzewo, l. Mamry, l. Swiecajty
Suwalskie	3	160	20	r. Elk, n. v. Prostki
Szczecinskie	6	6	5	r. Rega, r. Sarenka, n. t. Trzebiatów, p. n. t. Trzebiatów
Szczecinskie	—	40	243	l. Liwia Luza, n. v. Niechorze
Szczecinskie	3	90	4	s. c. Zalew Szczecinski, ch. n. t. Zarnowo
Szczecinskie	5	182	4	r. Pezinka, n. v. Pezino, l. Szadzko
Szczecinskie	11	65	411	l. n. v. Grzybno
Szczecinskie	5	160	83	r. Tywa, n. v. Banie, l. Dlugie
Tarnowskie	11	270	1	r. Dunajec, n. v. Wesolów l. Czchów
Wloclawskie	12	—	30	r. Wisla, n. t. Wloclawek
Wloclawskie	5	384	13	l. Gluszynskie
Wroclawskie	10	—	36	r. Barycz, v. Wasosz — v. Zmigród
Wroclawskie	9	2000	438	r. Barycz, n. v. Zmigród, p. n. v. Radziadz, p. n. v. Ruda Sulowska
Zielonogórskie	12	—	12	r. Odra, n. v. Cigacie
Zielonogórskie	5	—	74	r. Odra, n. v. Nietkowice
Zielonogórskie	—	183	83	l. Wilkowo, n. v. Wilkowo
Zielonogórskie	14	—	1300	r. Odra, n. v. Pomorsko
Zielonogórskie	3	—	37	r. Nysa Luzycka, n. v. Zasieki
Zielonogórskie	10	—	25	r. Bóbr, n. v. Krzystkowice

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Bielskopodlaskie	—	365	42	a. l. n. t., Mosty ch. Wieprz-Krzyna
Bialostockie	5	4	40	r. Narewka, n. t. Białowieża, p. Park Palacowy Białowieża
Bielskie	6	—	17	r. Sola, n. t. Zywiec, l. Porabka
Bydgoskie	—	800	1	l. Pakoskie, n. t. Inowrocław
Chelmskie	13	31	40	r. Piwonia, n. t. Gorki, l. Komarowski
Ciechanowskie	1	—	7	r. Lydynia, n. t. Ciechanów
Elblaskie	8	—	17	r. Elbląg, n. t. Elbląg
Elblaskie	10	150	4	l. Dabrówka, n. t. Malbork, ch. Juranta
Elblaskie	10	—	11	r. Pasleka, n. t. Orneta
Gorzowskie	6	—	44	r. Warta, n. t. Kostrzyn
Gorzowskie	5	100	141	r. Notec, n. t. Santok, r. a. Notec
Gorzowskie	—	340	60	l. Lubikowskie, n. t. Miedzyrzecz
Gorzowskie	14	—	340	r. Warta, n. t. Gorzow Wielkopolski
Kaliskie	—	1	21	s. n. v. Gorzupia
Kaliskie	9	—	19	r. Proсна, n. t. Kalisz
Katowickie	10	10	17	r. Klodnicza, p. n. t. Mikołów
Katowickie	20	—	7	r. Wisła, n. t. Goczalkowice
Katowickie	—	272	30	p. n. v. Markowice
Kielickie	18	36	48	r. Kamienna, n. t. Skarzynsko Kamienna
Kieleckie	20	—	27	r. Kamienna, t. Starachowice — v. Brody, p. n. t. Starachowice
Koninskie	6	110	90	r. Ner, n. t. Leczyca, p. s. n. t. Leczyca
Koninskie	8	500	565	r. Warta, r. Czarna Struga, n. t. Zagórow
Koninskie	10	—	220	r. Warta, n. v. Morzysław
Koninskie	4	—	178	r. Warta, n. t. Kolo
Koszalinskie	3	—	1	s. c. Kolobrzeg — Podczele
Leszczynskie	7	450	58	ch. Kanal Koscianski, n. t. Koscian
Leszczynskie	8	—	93	ch. Kanal Koscianski, n. t. Koscian
Lubelskie	18	—	248	r. Wieprz, n. v. Milejów
Lomzynskie	13	—	9	r. Elk, ch. Kanal Rudzki, n. v. Ruda
Olsztynskie	—	100	64	l. Wierzbowskie, n. t. Mragowo
Opolskie	12	10	23	r. Nysa Klodzka, n. v. Bielice
Opolskie	—	2000	17	l. Otmuchowskie, n. t. Otmuchów
Opolskie	12	—	24	r. Odra, n. t. Krapkowice
Ostroleckie	—	2	10	p. n. t. Ostrów Mazowiecka

1	2	3	4	5
Pilskie	10	359	100	r. Gwda, n. v. Dobrzyca, l. Zamkowe, l. Walcz
Pilskie	—	60	38	l. Jablonowskie, n. v. Jablonowo
Pilskie	8	—	75	r. Notec, n. v. Gulcz
Pilskie	10	—	800	r. Notec, n. v. Rosko
Piotrkowskie	12	8	40	r. Grabia, n. v. Grabica, p. Dziwle, p. Kociolki
Plockie	10	—	40	r. Ochnia, n. t. Kutno
Plockie	—	70	4	s. r. a. p. n. t. Kutno
Plockie	12	—	150	r. Studwia, n. t. Zychlin
Plockie	7	—	40	r. Bzura, n. v. Mirosławice
Poznanskie	—	323	70	l. Niepruszewo, n. v. Niepruszewo
Poznanskie	9	275	7	l. n. t. Gniezno
Radomskie	10	—	23	r. Pilica, n. v. Grabów nad Pilica
Radomskie	6	—	150	r. Pilica, n. t. Nowe Miasto, n. Pilica
Sieradzkie	—	10	34	r. a. Warta, n. v. Jeziorsko
Slupskie	11	300	6	r. Slupia, v. Wodnica — t. Ustka, l. Modla
Slupskie	14	—	98	r. Biała, n. v. Drzonowo
Suwalskie	10	1000	8	r. Wegorapa, n. t. Wegorzewo, l. Mamry, Oswin, Swiecajty
Szczecinskie	6	6	70	r. Rega, n. t. Trzebiatów
Szczecinskie	—	17	36	l. Trzyglów, n. v. Trzyglów, p. Mechowo
Szczecinskie	12	—	16	r. Ina, n. t. Suchan
Szczecinskie	8	—	77	r. Ina, n. t. Suchan
Szczecinskie	11	65	227	l. Kamienne, Jaz, Grzybno, p. s. n. t. Trzcinsko Zdrój
Szczecinskie	5	160	57	r. Tywa, l. Długie, p. n. v. Banie
Tarnowskie	10	10	11	r. Wisła, n. v. Uście Solne
Tarnowskie	10	—	16	r. Wisła, n. v. Szczucin
Torunskie	—	85	3	l. Kornatowo, Mlynisk, Niemczyk, p. Lipinek, n. v. Lisewo
Włocławskie	5	384	22	l. Gluszynskie, n. t. Radziejów
Wrocławskie	9	2000	94	r. Barycz, n. t. Zmigród, p. Ruda Sulowska
Wrocławskie	19	1300	503	r. Barycz, n. t. Milicz, p. n. t. Milicz
Wrocławskie	—	780	500	p. Potasznia
Zielonogórskie	—	21	21	p. s. n. v. Walowice
Zielonogórskie	15	—	30	r. Odra, n. v. Cigacice
Zielonogórskie	14	—	2600	r. Odra, n. v. Pomorsko
Zielonogórskie	3	—	17	r. Nysa Luzycka, n. v. Zasieki

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Bydgoskie	9	530	60	r. Gasawka, n. t. Znín, l. Znínskie, l. n. v. Dobrylewo, l. n. v. Sobiejuchy
Bydgoskie	2	120	10	r. Notec, n. v. Lacko, l. Tuczno
Chelmskie	21	31	8	r. Piwonia, n. v. Sosnowica, l. n. v. Komarówka
Czestochowskie	15	30	18	r. Kocinka, Wiercica, n. v. Przyrów
Elblaskie	10	150	26	l. Dabrówka, n. t. Malbork, ch. Kanál Juranta
Gorzowskie	5	630	110	r. Mysla, n. t. Myslibórz, l. Mysliborskie
Gorzowskie	—	121	112	l. Glebokie, n. t. Miedzyrzecz
Gorzowskie	14	—	140	r. Warta, n. t. Gorzów Wielkopolski
Katowickie	6	—	17	ch. n. t. Gliwice
Katowickie	10	10	17	r. Klodnica, p. n. t. Mikolow
Katowickie	—	30	900	p. r. a. Odra, n. t. Wodzislaw Slaski
Kieleckie	20	10	22	r. Kamienna, p. n. t. Skarzysko Kamienna
Kieleckie	21	12	28	r. Nida, n. v. Wislica
Koninskie	6	110	30	r. Ner, n. v. Nagórki
Koninskie	7	—	42	r. Warta, n. t. Pyzdry
Koninskie	8	500	70	r. Warta, Czarna Struga, n. t. Zagórów
Koninskie	10	—	46	r. Warta, v. Krzymów — v. Wola Podleзна
Koninskie	4	—	2	r. Warta, n. t. Kolo
Koszalinskie	—	350	45	l. n. v. Rydzewo
Leszczynskie	8	—	83	ch. Kanál Koscianski, n. t. Koscian
Lódzkie	4	—	5	p. n. v. Beldów
Nowosadeckie	5	—	5	r. Dunajec, n. v. Podegrodzie
Olsztynskie	6	280	30	r. Lyna, n. t. Olsztyn, l. Gim
Opolskie	12	10	54	r. Nysa Klodzka, n. v. Bielice
Opolskie	—	1950	120	l. Turawa
Opolskie	13	1	3	r. Osobloga, n. v. Raclawice Slaskie
Ostroleckie	—	2	20	p. n. t. Ostrów Maz.
Pilskie	—	200	103	f. n. t. Tuczno
Pilskie	10	—	350	r. Notec, n. v. Rosko
Plockie	10	—	10	r. Studwia, n. v. Sleszyn
Poznanskie	—	323	600	l. n. v. Niepruszewo
Poznanskie	10	12	120	r. Dojea, n. v. Blonsko

1	2	3	4	5
Sieradzkie	6	10	38	r. Warta, n. v. Jeziorsko
Sieradzkie	12	1	12	r. Bzura, n. v. Młodzieszyn
Suwalskie	10	1000	301	r. Węgorapa, n. t. Węgorzewo, l. Mamry, Oswin, Swiecajty
Suwalskie	4	70	50	r. Elk, n. v. Prostki
Suwalskie	9	9	70	l. Necko, Sajno, ch. Kanał Augustowski, n. t. Augustów
Szczecinskie	6	6	94	r. Rega, n. t. Trzebiatów
Szczecinskie	—	40	118	l. Liwia Luza
Szczecinskie	12	—	200	r. Ina, t. Suchan — t. Recz
Szczecinskie	11	65	248	l. n. t. Trzeczno Zdrój
Szczecinskie	5	160	1800	r. Tywa, v. Banie — v. Lubanowo L. Długie
Tarnowskie	10	10	6	r. Wisła n. t. Uście Solne
Tarnowskie	10	—	19	r. Wisła, n. v. Szczucin
Tarnowskie	10	—	40	r. Wisłoka, n. t. Debica
Torunskie	12	—	6	r. Wisła, n. t. Grudziadz
Torunskie	—	85	8	l. Kornatowo, Młynsk, Niemezyk, p. Lipinek, n. v. Lisewo
Włocławskie	5	384	32	l. Gluszynskie
Włocławskie	12	—	9	ch. Kanał Bachorze, n. v. Bachorza
Wrocławskie	9	2000	619	r. Barycz, n. t. Zmigród, p. Ruda Sulowska, Radziadz
Wrocławskie	18	1300	519	r. Barycz, n. t. Milicz, p. Milicz, Stawno, Grabownica
Wrocławskie	—	780	50	p. Potasznia
Wrocławskie	18	1300	519	r. Barycz, n. t. Milicz, Mil.piecz, Stawno, Grabownica
Wrocławskie	—	780	—	p. Potasznia
Zielonogórskie	8	—	4	r. Odra, n. v. Cigacice
Zielonogórskie	—	183	32	l. n. v. Wilkowo
Zielonogórskie	14	—	2000	r. Odra, v. Nietków — v. Pomorsko
Zielonogórskie	3	—	47	r. Nysa Luzycka, n. v. Zasieki

Month: November

Year: 1976.

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Czestochowskie	—	20	1	p. n. t. Czestochowa
Gorzowskie	—	100	60	l. Lubikowskie
Gorzowskie	—	121	47	l. Glebokie, n. t. Miedzyrzecz
Jeleniogórskie	31	180	62	r. Nysa Luzycka, n. t. Zgorzelec p. n. v. Lagów
Katowickie	—	272	30	p. n. v. Markowice

1	2	3	4	5
Katowickie	10	—	300	r. Odra, n. v. Markowice
Katowickie	10	10	21	r. Klodnica, p. n. t. Mikołów
Katowickie	—	320	12	p. Lubanie, n. t. Rybnik
Katowickie	—	2000	32	l. Goczalkowice
Kieleckie	10	7	20	r. Kamienna, n. t. Ostrowiec Swietokrzyski
Kieleckie	15	—	15	r. Wisła, n. v. Nowy Korczyn
Kieleckie	18	—	17	r. Nida, n. v. Wislica
Koninskie	—	200	266	l. Gopło, n. v. Przewóz
Koninskie	5	—	35	r. Warta, n. t. Pyzdry
Koninskie	8	500	12	r. Warta, Czarna Struga, s. n. t. Zagórów
Koninskie	10	—	2	r. Warta, n. t. Konin
Koninskie	10	—	13	r. Warta, n. v. Krzymów
Koninskie	4	10	40	r. Warta, n. t. Turek
Koszalinskie	—	500	21	l. Mostowo
Koszalinskie	4	200	37	l. Wielimie, n. t. Szczecinek
Krakowskie	12	300	60	r. Wisła, n. v. Wawrzencyce
Legnickie	15	76	6	r. Kaczawa, n. t. Złotoryja
Leszczyńskie	16	13	44	r. Barycz, n. v. Niechlów
Leszczyńskie	7	450	200	ch. Kanal Kosciński, n. t. Koscian
Lubelskie	18	—	6	r. Wieprz, n. v. Trawniki
Opolskie	7	—	17	r. Odra, n. v. Mikołin
Opolskie	—	41	19	p. n. v. Skorogoszcz
Opolskie	2	2000	44	l. Nyskie, r. Nysa Klodzka, n. t. Nysa
Pilskie	—	2000	7	l. n. t. Tuczno
Pilskie	10	—	48	r. Notec, n. v. Rosko
Pilskie	8	—	35	r. Notec, n. v. Gulez
Plockie	10	—	34	r. Studwia, n. t. Zychlin
Poznańskie	—	323	700	l. Niepruszewo, n. v. Niepruszevo
Poznańskie	9	275	5	p. n. t. Gniezno
Poznańskie	10	12	50	r. Dojca, l. n. t. Wolsztyn
Poznańskie	5	443	46	r. Warta, l. p. n. t. Puszczykowo
Skiernewickie	10	—	1	r. Bzura, n. t. Wyszogród
Suwańskie	10	1000	309	r. Węgorapa, n. t. Węgorzewo, l. Mamry, Oswin, Swiecajty
Suwańskie	9	9	62	l. Necko, Sajno, ch. Kanal Augustowski, n. t. Augustów
Ślupskie	10	—	2	r. Leba, n. t. Lebork
Szczecińskie	10	17	100	r. Rega, n. t. Trzebiatów, l. Trzyglów, p. Mechowo
Szczecińskie	—	40	82	l. Liwia Luza
Szczecińskie	12	—	100	r. Odra, n. t. Gryfino
Szczecińskie	12	—	50	r. Ina, n. t. Suchan
Tarnobrzeskie	8	—	12	r. Wisła, n. t. Tarnobrzeg
Tarnowskie	10	10	7	r. Wisła, n. v. Uście Solne
Tarnowskie	6	—	12	r. Wisłoka, n. t. Debica

1	2	3	4	5
Tarnowskie	10	—	52	r. Wisloka, n. t. Debica
Wloclawskie	8	80	50	r. v. Wola — v. Mazowsze
Wroclawskie	9	2000	2290	r. Barycz, n. t. Zmigród, p. Radziadz, Ruda Sulowska
Wroclawskie	18	1300	1028	r. Barycz, n. t. Milicz, p. Milicz
Wroclawskie	—	780	230	p. Potasznia
Zielonogórskie	14	—	538	r. Odra, v. Nietków — v. Pomorsko
Zielonogórskie	3	—	73	r. Nysa Luzycka, n. v. Zasieki

Month: November

Year: 1977.

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Bydgoskie	10	—	15	r. Gasawka, n. t. Szubin
Elblaskie	—	110	3	l. n. v. Balewo
Gdanskie	6	—	26	r. Wisla, v. Kiezmark — t. Swibno
Gorzowskie	—	121	62	l. Glebokie, n. t. Miedzyszec
Gorzowskie	18	6	6	r. Warta, n. t. Gorzów Wielkopolski
Jeleniogórskie	16	180	12	r. Nysa Luzycka, n. t. Zgorzelec, p. n. v. Lagów
Kieleckie	15	15	5	r. Nida, n. v. Wislica
Koninskie	8	—	85	r. Warta, n. t. Pyzdry
Koninskie	8	500	32	r. Warta, Czarna Struga, s. n. t. Zagorów
Koninskie	4	—	74	r. Warta, n. t. Turek
Leszczynskie	7	2	120	l. n. t. Koscian
Leszczynskie	10	—	65	ch. Kanal Koscianski, n. t. Koscian
Leszczynskie	15	—	167	r. Barycz, n. v. Niechlów
Lubelskie	6	—	3	r. Wisla, n. v. Wólka Profecka
Lubelskie	17	120	118	r. Wieprz, n. t. Trawniki
Olsztynskie	14	—	6	r. Lyna, n. t. Sepopol
Opolskie	15	—	106	r. Odra, n. t. Brzeg
Opolskie	—	2000	1	l. Turawa
Opolskie	2	2000	59	l. Nyskie, r. Nysa Klodzka, n. t. Nysa
Pilskie	10	—	3	r. Gwda, t. Jastrowie — v. Tarnówka
Plockie	10	—	1	r. Skrwa, n. v. Studzieniec
Poznanskie	—	317	215	l. n. v. Niepruszewo
Poznanskie	—	205	3	r. Welna, p. n. t. Gniezno
Poznanskie	2	55	200	r. Dojea, l. n. t. Wolsztyn
Poznanskie	10	443	1860	r. Warta, l. p. n. t. Puszczykowo
Siedleckie	10	3	1	r. n. v. Buczyn

1	2	3	4	5
Suwalskie	11	—	29	l. Necko, Sajno, ch. Kanał Augustowski, n. t. Augustów
Szczecinskie	4	—	356	s. c. Zalew Szczeciński, n. v. Zarnowo
Szczecinskie	—	10	550	r. Odra, n. t. Gryfino
Tarnowskie	10	—	79	r. Wisłoka, n. t. Debica
Wrocławskie	—	857	19	l. Gluszyńskie
Wrocławskie	10	50	30	r. v. Wola — v. Mazowsze
Wrocławskie	9	2000	2320	r. Barycz, n. t. Zmigród, p. Radziadz
Wrocławskie	9	1300	1134	r. Barycz, n. t. Milicz p. Grabownica
Wrocławskie	—	780	7	p. Potasznia, n. t. Milicz
Zielonogórskie	5	—	75	r. Odra, n. v. Brody
Zielonogórskie	—	151	29	l. n. v. Wilkowo

Month: November

Year: 1978

Voidship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Bydgoskie	—	60	40	p. n. t. Bydgoszcz
Elbląskie	2	200	7	l. Dąbrówka, ch. Kanał Juranta, n. t. Malbork
Elblaskie	—	110	7	l. Balewskie
Elblaskie	9	9	1	r. Pasleka, Drweca Warmin-ska, n. t. Orneta
Gorzowskie	5	50	30	r. n. v. Sciechów
Gorzowskie	18	—	200	r. Warta, n. t. Gorzów Wielkopolski
Kaliskie	10	—	32	r. Prosna, v. Gizalki — v. Chocz
Kaliskie	—	3	40	p. n. v. Gorzupia
Katowickie	10	—	30	r. Odra, n. v. Markowice
Katowickie	—	380	15	p. n. t. Rybnik
Katowickie	18	12	13	r. Wisła, v. Rudoltowice — v. Wola
Kieleckie	4	60	26	r. Kamienna, t. Starachowice — v. Brody, p. n. t. Starachowice
Koninskie	5	—	167	r. Warta, n. t. Pyzdry
Koninskie	10	—	20	r. Warta, n. t. Konin
Koninskie	12	30	18	r. Warta, n. v. Biechowy
Kozalinskie	2	—	30	se. n. t. Kolobrzeg
Kozalinskie	—	300	80	l. n. v. Rydzewo
Kozalinskie	—	129	6	l. n. t. Czaplinek
Krakowskie	62	—	58	r. Wisła, t. Zator — t. Kraków
Legnickie	—	45	9	l. n. v. Koskowice
Leszczyńskie	16	13	207	r. Barycz, n. v. Niechlów
Lubelskie	17	—	10	r. Wieprz, n. v. Trawniki

1	2	3	4	5
Olsztynskie	10	—	86	r. Drweca, n. v. Samborowo
Olsztynskie	—	140	3	l. n. v. Sterlawki Wielkie
Olsztynskie	—	815	9	l. Karas, n. t. Ilawa
Opolskie	—	150	90	p. n. t. Niemodlin
Opolskie	—	2000	1	l. Turawa
Pilskie	10	80	40	r. Gwda, n. v. Dobrzyca, l. Zamkowe, l. Walcz
Pilskie	10	—	300	r. Notec, n. v. Rosko
Plockie	10	—	47	r. Ochnia, n. t. Kutno
Poznanskie	—	325	180	l. n. v. Niepruszewo
Poznanskie	10	463	867	r. Warta, l. p. n. t. Puszczykowo
Siedleckie	8	—	11	r. n. v. Buczyn
Sieradzkie	19	15	8	r. Warta, n. v. Siedlatków
Skierniewickie	10	—	2	r. Bzura, n. t. Wyszogród
Suwalskie	—	200	41	l. Wojnowo
Suwalskie	9	9	26	l. Necko, Sajno, ch. Kanał Augustowski, n. t. Augustów
Szczecinskie	—	400	2200	ch. r. a. n. t. Szczecin
Wloclawskie	12	—	755	ch. Kanał Bachorze, v. Sedzin — v. Ujma Duza
Wroclawskie	9	2000	78	r. Barycz, n. t. Zmigród, p. Radziadz
Wroclawskie	—	70	436	p. Radziadz
Wroclawskie	6	1300	428	r. Barycz, p. n. t. Milicz
Wroclawskie	—	780	1076	p. Potasznia
Zielonogórskie	10	—	530	r. Odra, n. v. Pomorsko

Month: November

Year: 1979

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Warszawskie	32	—	2	r. Wisła, n. t. Warszawa
Gorzowskie	—	10	70	l. Mysliborskie
Gorzowskie	15	25	70	r. Mysła, n. v. Mystki
Gorzowskie	4	425	135	r. Plonia, n. t. Barlinek, l. Barlinskie
Gorzowskie	—	150	200	l. Radun, l. n. t. Choszczno
Gorzowskie	20	—	54	r. Warta, n. t. Gorzów Wielkopolski
Gorzowskie	17	—	8	r. Warta, t. Sieraków — t. Miedzychód
Katowickie	10	12	11	r. Klodnica, p. n. t. Mikołów
Katowickie	—	460	80	p. n. v. Brzezie
Kieleckie	13	10	5	r. Nida, n. v. Wislica
Koninskie	7	—	59	r. Warta, n. t. Pyzdry
Koninskie	8	100	30	r. Warta, Czarna Struga, n. t. Zagórzów
Koninskie	10	—	21	r. Warta, n. t. Konin
Koszalinskie	—	240	24	l. n. v. Rydzewo

1	2	3	4	5
Koszalinskie	—	210	6	l. n. t. Czaplinek
Leszczyńskie	15	13	48	r. Barycz, n. v. Niechlów
Opolskie	12	—	34	r. Nysa Klodzka, n. v. Bielice
Opolskie	13	—	1	r. Odra, n. t. Brzeg
Opolskie	2	800	255	l. Nyskie, r. Nysa Klodzka, n. t. Nysa
Opolskie	9	—	12	r. Odra, n. v. Dziergowice
Pilskie	—	160	9	l. Betyń
Pilskie	10	—	2	r. Notec, t. Wielen — v. Rosko
Pilskie	8	—	19	r. Notec, n. v. Gulcz
Poznańskie	10	—	20	r. Warta, n. t. Oborniki
Poznańskie	5	668	32	r. Warta, l. p. n. t. Puszczykowo
Sieradzkie	4	—	30	r. Warta, n. v. Jeziorsko
Skierniewickie	11	—	19	r. Bzura, n. t. Lowicz
Śląskie	1	6	3	r. Bytowa, n. t. Bytów
Suwalskie	9	525	18	l. Necko, Sajno, ch. Kanał Augustowski, n. t. Augustów
Szczecińskie	12	350	1217	r. t. Trzcinsko Zdrój — t. Chojno
Wrocławskie	5	—	5	ch. Kanał Bachorze, v. Ujma Duża — v. Sedzin
Wrocławskie	9	2000	2689	r. Barycz n. t. Zmigród, p. Radziadz, Ruda Sulowska
Wrocławskie	—	700	410	p. Radziadz
Wrocławskie	6	1300	1143	r. Barycz, n. t. Milicz, p. Grabownica
Wrocławskie	—	780	110	p. Potasznia
Wrocławskie	7	6	203	r. Odra, n. t. Wrocław
Wrocławskie	18	—	95	r. Odra, n. t. Uraz
Zielonogórskie	5	—	36	r. Odra, v. Brody — v. Nietkowice
Zielonogórskie	14	—	743	r. Odra, n. v. Nietków
Zielonogórskie	3	—	21	r. Nysa, n. v. Zasięki

Month: January

Year: 1969

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Gorzowskie	12	8	360	r. Stara Notec, n. t. Drezdenko
Gorzowskie	16	—	31	r. Notec, n. t. Santok
Katowickie	6	50	12	r. Odra, n. t. Racibórz, p. n. v. Syrynia
Legnickie	8	—	23	r. Cicha Wola, v. Ruja — v. Tyniec Legnicki
Leszczyńskie	7	—	320	ch. Kanał Kosciński, n. t. Koscian
Opolskie	12	—	6	r. Nysa Klodzka, n. t. Paczków
Opolskie	10	—	3	r. n. v. Gostomia
Pilskie	15	—	10	r. Gwda, v. Motylewo — v. Dobrzyca
Poznańskie	4	—	9	r. Warta, v. Czerwonak — t. Poznań

1	2	3	4	5
Poznanskie	23	—	1	r. Warta, n. t. Oborniki
Szczecinskie	3	—	40	sc. Zalew Szczecinski, n. v. Stepnica
Szczecinskie	5	—	3	s. c. Zalew Szczecinski, n. v. Kopice
Szczecinskie	—	100	2	l. Dabie, n. v. Kliniska Wielka
Szczecinskie	11	65	28	r. t. Trzeinsko Zdrój — t. Chojna
Zielonogórskie	7	—	12	ch. Obrzanski Kanal Pólnocny, n. v. Wroniawy
Zielonogórskie	1	340	3	r. Dojca, n. t. Wolsztyn, l. Berzynskie
Zielonogórskie	6	—	49	r. Bóbr, n. v. Krzystkowice
Zielenegórskie	9	—	30	r. Krzycki Rów, n. v. Siedlisko

Month: January

Year: 1970

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Gdanskie	4	—	4	r. Wisla, v. Kiezmark — v. Swibno
Gorzowskie	5	400	312	r. Stara Notec, n. t. Drezdenko
Gorzowskie	10	—	5	r. Notec, Warta, n. v. Santok
Katowickie	11	50	78	r. Odra, n. v. Lubomia
Leszczynskie	10	—	6	ch. Kanal Obry, n. v. Niedzwiady
Zielonogórskie	7	—	6	r. Nysa Luzycka, v. Zarki Wielkie — v. Leknica

Month: January

Year: 1971

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
St. Warszawskie	20	—	2	r. Wisla, n. t. Warszawa
Bielskie	7	—	8	r. Wisla, Przemsza, n. t. Chelmek
Gorzowskie	—	40	2	l. n. t. Myslibórz
Gorzowskie	—	5000	120	a. l. Kostrzynski Zbiornik Retencyjny
Gorzowskie	14	—	40	r. Warta, n. t. Gorzów Wielkopolski
Koninskie	5	—	300	r. Warta, n. t. Pyzdry
Koszalinskie	6	—	15	s. c. t. Kolobrzeg — v. Ustronie Morskie
Pilskie	10	—	42	r. Gwda, n. t. Pila
Pilskie	7	170	21	r. Notec, v. Zacharzyn — t. Szamocin
Piotrkowskie	17	—	2	p. n. t. Tomaszów Maz.
Poznanskie	10	5	3	r. Dojca, n. v. Kuznica Zbaska
Szczecinskie	7	38	1	r. Rega, v. Klodkowo — t. Trzebiatów, p. n. v. Chometowo
Szczecinskie	10	—	2	r. Ina, n. t. Suchan
Szczecinskie	11	—	182	r. t. Trzeinsko Zdrój — t. Chojna

1	2	3	4	5
Wloclawskie	12	—	3	r. Wisla, n. t. Wloclawek
Wroclawskie	8	—	12	r. Strzegomka, t. Katy Wroclawskie — v. Bogdaszowice
Zielonogórskie	2	200	183	r. Dojca, n. t. Wolsztyn, l. Berzynskie
Zielonogórskie	9	—	19	r. Odra, v. Brody — v. Nietkowice
Zielonogórskie	10	—	4	r. Nysa Luzycka, n. v. Zarki Wielkie
Zielonogórskie	1	—	50	r. Nysa Luzycka, n. v. Zasieki

Month: January

Year: 1972

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Gdanskie	6	—	6	se. v. Stogi — t. Sobieszewo
Gorzowskie	10	1300	4000	r. Warta, n. t. Kostrzyn
Gorzowskie	6	—	7	r. Warta, n. t. Kostrzyn
Gorzowskie	—	340	70	l. Lubikowskie
Kieleckie	10	—	9	r. Nida, n. t. Nowy Korczyn
Koninskie	10	—	33	r. Warta, n. v. Krzymów
Leszczynskie	7	—	24	ch. Kanal Koscianski, n. t. Koscian
Leszczynskie	9	—	300	ch. Kanal Koscianski, n. t. Koscian
Leszczynskie	15	—	7	ch. Kanal Obry, n. v. Niedzwiady
Opolskie	12	—	16	r. Odra, t. Krapkowice — v. Zuzela
Ostroleckie	3	—	4	r. Orzyc, n. t. Maków Maz.
Pilskie	10	—	287	r. Notec, n. t. Wielen
Piotrkowskie	10	—	3	r. Pilica, n. t. Tomaszów Maz.
Poznanskie	5	20	28	r. Dojca, l. n. t. Wolsztyn
Sieradzkie	7	—	9	r. Grabia, n. v. Kol. Kozuby Stare
Slupskie	—	10	1	l. n. t. Miastko
Szczecinskie	3	—	300	se. Zalew Szczecinski, v. Stepnica — v. Jarszewko
Szczecinskie	7	38	19	r. Rega, n. t. Trzebiatów
Szczecinskie	13	—	26	r. t. Trzeinsko Zdrój — t. Chojna
Torunskie	12	88	10	r. Drweca, v. Elgiszewo — v. Mlyniec, l. Okonin
Wroclawskie	9	2000	700	r. Barycz, n. t. Zmigród, p. Radziadz
Wroclawskie	29	—	1	r. Odra, n. v. Uraz
Zielonogórskie	—	20	15	p. n. t. Kozuchów
Zielonogórskie	12	—	400	r. Odra, n. v. Pomorsko
Zielonogórskie	7	—	4	r. Nysa Luzycka, n. v. Zarki Wlk.
Zielonogórskie	3	—	38	r. Nysa Luzycka, n. v. Zasieki

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Gorzowskie	10	50	2	r. Bukówka, n. v. Mlynek, l. n. v. Dzierzazno Wielkie
Gorzowskie	5	600	14	r. Mysła, n. t. Myslibórz, l. Mysliborskie
Gorzowskie	16	—	147	r. Notec, n. v. Santok
Gorzowskie	—	340	150	l. Lubikowskie
Jeleniogórskie	2	302	1	r. a. l. n. t. Zawidów
Jeleniogórskie	8	5000	12	r. Bóbr, t. Lwówek — v. Włodzice Wielkie
Kaliskie	15	100	50	r. Prosna, v. Ciemierów — v. Tarnowa
Katowickie	16	50	57	r. Odra, n. v. Lubomia
Katowickie	11	—	14	r. Odra, n. t. Racibórz
Katowickie	3	—	12	r. Klodnica, n. t. Mikołów
Kieleckie	20	—	1	r. Nida, Bobrza, n. v. Tokarnia
Leszczyńskie	—	280	80	l. Przemeckie, l. n. v. Blotnica
Leszczyńskie	8	—	43	ch. Kanal Obry, n. t. Koscian
Leszczyńskie	6	80	8	l. n. v. Brenno
Opolskie	12	—	8	r. Odra, t. Krapkowice — v. Zuzela
Pilskie	10	—	160	r. Notec, v. Rosko — t. Wielen
Poznańskie	5	649	1	r. Warta, l. p. n. t. Puszczykowo
Sieradzkie	12	—	68	r. Warta, t. Warta — v. Peczniew
Ślupskie	3	5	42	l. Lebsko, n. v. Izbica, r. Leba, n. v. Izbica
Ślupskie	—	60	41	l. n. t. Miastko
Szczecińskie	11	65	33	r. t. Trzcinsko Zdrój — t. Chojna
Tarnowskie	10	—	1	r. Wisłoka, n. t. Debica
Wrocławskie	7	1800	2	r. Barycz, n. t. Milicz
Zielonogórskie	7	—	129	ch. Obrzański Kanal Północny, n. v. Wroniawy
Zielonogórskie	10	—	1	r. Odra, n. v. Cigacice
Zielonogórskie	14	—	1500	r. Odra, v. Nietków — v. Pomorsko
Zielonogórskie	3	—	25	r. Nysa Luzycka, n. v. Zasieki
Zielonogórskie	10	—	5	r. Bóbr, n. v. Krzystkowice

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Bydgoskie	8	4	3	r. Notec, v. Tur — v. Rynarzewo
Ciechanowskie	2	—	4	r. Lydynia, n. t. Ciechanów
Elbląskie	—	200	12	l. Dabrówka

1	2	3	4	5
Gorzowskie	11	65	207	r. t. Trzcinsko Zdrój — t. Chojna
Gorzowskie	6	—	7	r. Warta, n. t. Kostrzyn
Gorzowskie	14	—	32	r. Warta, v. Borek — t. Gorzów Wielkopolski
Krakowskie	20	—	1	r. Wisła, t. Zator — t. Kraków
Koninskie	5	—	19	r. Warta, n. t. Pызdry
Koninskie	10	—	8	r. Warta, n. v. Krzymów
Legnickie	11	20	180	r. Barycz, n. v. Niechlów
Legnickie	8	—	9	r. Cicha Woda, v. Tyniec Legnicki — v. Ruja
Leszczynskie	—	50	15	l. Przemeckie
Leszczynskie	13	3	13	r. Barycz, v. Wasosz — v. Wierzowie Wielkie
Lomzynskie	—	1	2	l. n. t. Ostrów Maz.
Opolskie	12	—	12	r. Nysa Klodzka, n. v. Bielice
Pilskie	10	—	150	r. Notec, v. Rosko — t. Wielen
Piotrkowskie	12	2	30	r. Grabia, n. v. Grabica
Sieradzkie	10	—	6	r. Warta, v. Peczniew — t. Warta
Slupskie	—	60	1	l. n. t. Miastko
Szczecinskie	—	300	2	l. Miedwie
Szczecinskie	3	—	170	r. Odra, Regalica, n. t. Gryfino
Szczecinskie	3	90	60	sc. Zalew Szczecinski, n. v. Zarnowo
Torunskie	24	—	21	r. Wisła, n. t. Grudziadz
Zielonogórskie	12	—	128	r. Odra, n. v. Cigaciece
Zielonogórskie	5	—	183	r. Odra, v. Brody — v. Nietkowice
Zielonogórskie	—	183	78	l. n. v. Wilkowo
Zielonogórskie	14	—	1300	r. Odra, n. v. Pomorsko
Zielonogórskie	3	—	18	r. Nysa Luzycka, n. v. Zasieki

Month: January

Year: 1975

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Ciechanowskie	1	—	9	r. Lydynia, n. t. Ciechanow
Elblaskie	10	150	7	ch. Kanal Juranta, n. t. Malbork, l. Dabrówka
Gdanskie	2	—	6	r. Wisła, n. t. Tczew
Gorzowskie	8	—	152	r. Notec, v. Lipki Male — v. Santok
Gorzowskie	—	340	1600	l. Lubikowskie
Gorzowskie	14	—	380	r. Warta, v. Borek — t. Gorzow
Jeleniogórskie	16	180	90	r. Nysa Luzycka, n. t. Zgorzelec, p. n. v. Lagów
Kaliskie	15	—	75	r. Prosna, n. v. Ruda Komorska
Katowickie	10	—	21	r. Klodnica, n. t. Mikołów

1	2	3	4	5
Katowickie	4	10	12	r. Odra, n. v. Brzezie, p. n. v. Lubomia
Katowickie	20	—	7	r. Wisła, t. Skoczów — t. Strumien
Katowickie	11	—	9	r. Odra, n. t. Racibórz
Kieleckie	18	36	1	r. Kamienna, t. Skarżysko Kamienna — t. Starachowice
Koninskie	8	—	15	r. Warta, n. t. Uniejów
Koninskie	6	110	38	r. Ner, n. t. Leczyca
Koninskie	5	—	81	r. Warta, n. t. Pyzdry
Koninskie	8	500	138	r. Warta, n. t. Zagórów
Koninskie	5	500	19	r. Warta, t. Konin — v. Sławsk
Krakowskie	10	10	6	r. Wisła, n. v. Wawrzenczyce
Legnickie	8	—	3	r. Cicha Woda, v. Tyniec Legnicki — v. Ruja
Leszczynskie	7	450	150	ch. Kanal Kosciński, n. t. Koscian
Leszczynskie	10	—	43	r. Barycz, v. Wasosz — v. Wierzowice Wielkie
Opolskie	2	10	21	p. n. t. Gliwice
Opolskie	12	—	17	r. Odra, t. Krapkowice — v. Zuzela
Ostroleckie	—	2	13	p. n. t. Ostrów Maz.
Pilskie	—	60	1	l. n. v. Jabłonowo
Pilskie	—	2000	50	l. n. t. Tuczo
Pilskie	10	—	2	r. Warta, n. t. Wronki
Piotrkowskie	12	8	11	r. Grabia, n. v. Druzbice
Poznańskie	5	20	250	ch. Obrzański Kanal Środkowy, n. v. Tarnowa
Poznańskie	5	469	18	r. Warta, l. p. n. t. Puszczykowo
Radomskie	10	—	1	r. Radomka, n. v. Bartodzieje
Szczecińskie	5	—	350	r. Odra, Regalica, n. t. Gryfino
Szczecińskie	8	—	8	s. c. Zalew Szczeciński, n. v. Zarnowo
Szczecińskie	10	—	6	r. Ina, n. t. Suchan
Szczecińskie	11	65	246	l. n. t. Trzcinsko Zdrój
Szczecińskie	5	160	32	r. Tywa, n. v. Banie, l. Długie
Wrocławskie	5	384	18	l. Głuszynskie
Wrocławskie	9	2000	35	r. Barycz, n. t. Zmigród, p. Radziadz
Wrocławskie	19	1300	2	r. Barycz, n. t. Milicz, p. n. t. Milicz
Wrocławskie	4	80	12	r. Strzegomka, s. n. t. Katy Wrocławskie
Zielonogórskie	12	—	31	r. Odra, n. v. Cigacie
Zielonogórskie	15	—	18	r. Odra, n. v. Cigacie
Zielonogórskie	—	120	54	l. n. v. Stróżka
Zielonogórskie	14	—	4400	r. Odra, n. v. Nietków
Zielonogórskie	3	—	53	r. Nysa Łużycka, n. v. Zasieki

Month: January

Year: 1976

Voidship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Bydgoskie	11	—	19	r. Gasawka, n. t. Znin
Elblaskie	13	150	7	r. Nogat, n. t. Malbork, l. Dabrówka
Gorzowskie	5	630	9	r. Mysła, n. t. Myslibórz, l. Mysliborskie
Gorzowskie	—	3500	2800	a. l. Kostrzynski Zbiornik Retencyjny, n. t. Kostrzyn
Gorzowskie	14	—	240	r. Warta, v. Borek — t. Gorzów Wielkopolski
Katowickie	10	50	30	r. n. t. Wodzisław Śląski
Katowickie	11	—	7	r. Odra, n. t. Racibórz
Kieleckie	20	5	3	r. Kamienna, t. Skarżysko Kamienna — v. Brody
Koninskie	5	—	69	r. Warta, n. t. Pyzdry
Koninskie	8	500	300	r. Warta, Czarna Struga, n. t. Zagórów
Koninskie	10	—	4	r. Warta, n. v. Krzymów
Ostroleckie	—	2	5	p. n. t. Ostrów Maz.
Plockie	10	—	4	r. Ochnia, n. t. Kutno
Plockie	12	—	2	r. Studwia, n. t. Zychlin
Sieradzkie	10	—	7	r. Warta, n. t. Warta
Szczecińskie	5	160	16	r. Tywa, n. v. Banie, l. Długie
Zielonogórskie	5	—	350	r. Odra, v. Brody — v. Nietkowice
Zielonogórskie	3	—	73	r. Nysa Łużycka, n. v. Zasięki
Zielonogórskie	10	—	12	r. Bóbr, n. v. Krzystkowica

Month: January

Year: 1977

Voidship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Warszawskie	—	200	7	a. l. Zalew Zegrzyński
Gorzowskie	14	20	54	r. Warta, n. t. Gorzów Wielkopolski
Koninskie	5	—	800	r. Warta, n. t. Pyzdry
Koninskie	8	500	66	r. Warta, Czarna Struga, n. t. Zagórów
Leszczyńskie	—	165	2	l. n. v. Wojnowice
Lubelskie	6	—	2	r. Wisła, n. v. Wólka Profecka
Ostroleckie	—	2	10	p. n. t. Ostrów Maz.
Plockie	10	—	1	r. Studwia, n. t. Zychlin

1	2	3	4	5
Sieradzkie	11	—	4	r. Warta, n. t. Uniejów
Tarnowskie	10	—	9	r. Wisłoka, n. t. Debica
Torunskie	12	—	2	r. Rypienica, t. Rypin — v. Osiek
Włocławskie	5	384	1	l. Głuszynskie
Włocławskie	10	—	5	r. n. v. Kłobia
Wrocławskie	9	2000	70	r. Barycz, n. t. Zmigród, p. Radziadz
Zielonogórskie	5	—	57	r. Odra, v. Brody — v. Nietkowice
Zielonogórskie	14	—	7370	r. Odra, n. v. Nietków
Zielonogórskie	3	—	33	r. Nysa Luzycka, n. v. Zasieki

Month: January

Year: 1978

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Gorzowskie	18	—	220	r. Warta, v. Borek — t. Gorzów Wielkopolski
Kaliskie	10	—	28	r. Proсна, v. Chocz — v. Gizalki
Katowickie	—	1	11	p. n. t. Gliwice
Kaninskie	5	—	135	r. Warta, n. t. Pyzdry
Koninskie	3	—	246	r. Warta, n. t. Turek
Leszczyńskie	10	—	30	ch. Kanal Obry, n. t. Koscian
Lubelskie	15	—	3	r. n. v. Niedrzwica Duza
Opolskie	15	—	10	r. Odra, n. t. Brzeg
Pilskie	10	—	4	r. Gwda, v. Tarnówka — t. Jastrowie
Płockie	10	—	3	r. Studwia, n. t. Zychlin
Poznańskie	10	443	64	r. Warta, v. Rogalinek — t. Puszczykowo, l. p. n. t. Puszczykowo
Ślupskie	8	4	2	r. Bytówka, v. Ugoszcz — t. Bytów, l. n. t. Bytów
Ślupskie	2	—	1	r. Brda, n. v. Trzyniec
Wrocławskie	9	2000	20	r. Barycz, n. t. Zmigród, p. Radziadz, p. n. v. Sulów
Zielonogórskie	—	156	36	l. n. v. Wilkowo
Zielonogórskie	15	—	900	r. Odra, n. v. Nietków
Zielonogórskie	8	—	16	ch. Obrzański Kanal Północny, n. v. Wroniawy
Zielonogórskie	3	—	19	r. Nysa Luzycka, n. v. Zasieki

Month: January

Year: 1979

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Warszawskie	32	—	2	r. Wisła, n. t. Warszawa
Gorzowskie	18	25	148	r. Warta, v. Borek — t. Gorzów Wielkopolski
Kaliskie	15	—	500	r. Prosna, n. v. Ruda Komorska
Koninskie	10	—	80	r. Warta, n. v. Krzymów
Koszalinskie	4	200	1000	r. Gwda, n. v. Gwda Wielka, l. Wielkie
Koszalinskie	—	1579	9	l. Lubie
Opolskie	12	—	6	r. Odra, v. Zuzela — t. Krapkowiec
Opolskie	8	—	3	r. Klodnica, n. t. Kedzierzyn
Torunskie	7	—	1	l. Długie, r. Rypienica, n. v. Strzygi
Włocławskie	7	350	10	l. Borzymowskie, r. n. v. Chocен
Wrocławskie	—	700	21	p. Radziadz
Zielonogórskie	3	—	17	r. Nysa Luzycka, n. v. Zasięki

Month: January

Year: 1980

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Elblaskie	3	230	2	ch. Kanál Juranta, n. t. Malbork, l. Dabrowka
Gorzowskie	—	20	18	l. Mysliborskie
Gorzowskie	18	—	120	r. Warta, v. Borek — t. Gorzów Wielkopolski
Katowickie	6	460	58	r. Odra, p. n. v. Lubomia
Katowickie	—	1000	2	l. Goczalkowickie
Koninskie	7	—	280	r. Warta, n. t. Pyzdry
Koninskie	8	1000	50	r. Warta, r. a. n. t. Zagórow
Koninskie	3	—	9	r. Warta, n. t. Turek
Leszczyńskie	15	13	32	r. Barycz, n. v. Niechlów
Opolskie	22	—	1	r. Odra, n. t. Opole
Pilskie	—	160	23	l. Betyń
Płockie	8	20	2	r. Studwia, n. t. Zychlin
Poznańskie	6	7	6	r. Wrzesnica, n. v. Czarniejewo
Szczecińskie	12	260	7	l. Liwia Luza, s. c. n. v. Rewal
Szczecińskie	12	100	36	r. t. Trzcinsko Zdrój — t. Chojna, l. n. t. Trzcinsko Zdrój
Torunskie	10	—	2	r. Wisła, n. t. Torun
Wrocławskie	—	700	16	p. Radziadz
Zielonogórskie	15	—	20	r. Odra, n. v. Cigacice
Zielonogórskie	—	2	300	l. n. v. Strózka

Voivodship	Length of the obser. ved reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Bydgoskie	9	459	7	r. Gasawka, n. t. Znin, l. Duze Zninskie
Bydgoskie	6	1	21	r. Kamionka, n. w. Kamien Kra-jenski
Gdanskie	7	—	7	se. t. Wladyslawowo — v. Chalupy
Gorzowskie	6	7	66	r. Warta, r. a. v. Kamien Maly — v. Warniki
Gorzowskie	5	100	2504	r. Notec, r. a. v. Santok — v. Polich-no Stare
Gorzowskie	14	20	240	r. Warta, v. Borek — t. Gorzów Wielkopolski
Gorzowskie	6	630	170	r. Mysla, n. t. Myslibórz, l. Mysli-borskie
Katowickie	5	—	11	r. Odra, n. t. Racibórz
Katowickie	10	70	18	r. Odra, p. n. v. Lubomia
Koninskie	5	—	1535	r. Warta, n. t. Pyzdry
Koninskie	8	500	300	r. Warta, r. a. r. Struga, v. Lad — v. Ciazen
Koninskie	10	—	150	r. Warta, v. Krzymów — v. Wola Podlezna
Leszczynskie	—	165	12	l. n. v. Wojnowice
Lubelskie	6	—	5	r. Wisla, n. v. Wólka Profecka
Lubelskie	9	5	5	r. Wieprz, n. v. Milejów
Opolskie	—	272	6	l. p. „Lezczak”
Opolskie	12	—	26	r. Odra, t. Krapkowice — v. Zuzela
Opolskie	8	—	2	r. Klodnica, n. t. Kedzierzyn
Pilskie	10	—	30	r. Notec, t. Wielen — v. Rosko
Plockie	—	70	6	p. s. n. t. Kutno
Plockie	12	—	17	r. Studwia, n. t. Zychlin
Plockie	10	—	4	r. Studwia, n. v. Biala
Plockie	10	3000	35	r. Skrwa, r. a. n. t. Sierpe
Poznanskie	5	443	36	r. Warta, l. p. n. t. Puszczykowo
Poznanskie	10	—	3	r. Warta, v. Obrzyeko — t. Wronki
Poznanskie	6	—	16	r. Warta, v. Czerwonak — t. Poz-nan
Siedleckie	8	5	18	r. s. n. v. Zbuczyn Poduchowny
Sieradzkie	—	10	47	r. Warta, r. a. n. v. Jeziorsko
Szczecinskie	6	6	11	r. Rega, v. Klodkowo — t. Trzebia-tów p. v. Lewice
Szczecinskie	8	—	30	r. Ina, n. t. Suchan
Szczecinskie	5	160	30	r. Tywa, n. v. Banie, l. Długie
Torunskie	8	—	12	r. Wisla, n. t. Grudziadz
Wroclawskie	—	780	6	p. n. v. Potasznia

1	2	3	4	5
Zielonogórskie	15	—	19	r. Odra, n. v. Cigacice
Zielonogórskie	5	—	290	r. Odra, v. Nietkowice — v. Brody
Zielonogórskie	14	—	29	r. Odra, n. v. Pomorsko

Month: March

Year: 1977

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Bielskopodlaskie	11	—	40	r. Bug, v. Gnojno — v. Janów Podlaski
Bielskopodlaskie	—	365	108	r. a. Kanal Wieprz-Krzna, n. v. Kodoniec
Białostockie	8	15	200	r. p. n. v. Ogrodniczki
Białostockie	17	—	80	r. Nurzec, n. t. Bransk
Białostockie	5	4	42	r. Narewka, n. v. Białowieża
Bielskie	10	—	3	r. Wisła, t. Wisła — v. Nierodzim
Bydgoskie	6	—	15	r. Wisła, n. t. Koronowo
Bydgoskie	5	60	36	r. p. n. v. Potulice
Gdańskie	7	—	1	s. c. t. Władysławowo — v. Chalupy
Gorzowskie	6	7	77	r. Warta, n. t. Kostrzyn
Gorzowskie	—	4500	2654	a. l. Kostrzyn Zbiornik Retencyjny
Gorzowskie	8	—	189	r. Warta, v. Kamień Mały — Kłopotowo
Gorzowskie	18	200	196	r. Warta, r. a. v. Borek — t. Gorzów Wielkopolski
Katowickie	10	70	70	r. Odra, n. v. Lubomia, p. n. v. Lubomia
Katowickie	—	2000	1	l. Goczalkowice
Kieleckie	20	—	4	r. Kamienna, v. Brody — t. Skarżysko Kamienna
Koninskie	—	150	13	l. Gopło, n. v. Przewóz
Koninskie	5	—	18	r. Warta, v. t. Pyzdry
Koninskie	8	500	2	r. Warta, Struga, s. v. Gizań — v. Ład
Koninskie	4	10	136	r. Warta, n. t. Turek
Koninskie	11	—	47	r. Warta, v. Biechowy — v. Ochle
Koszalinskie	—	350	7	l. n. v. Przyton, Rydzewo
Koszalinskie	—	57	140	l. n. v. Broczyno
Leszczyńskie	7	450	64	ch. Kanal Obry, r. a. n. t. Koscian
Leszczyńskie	8	—	300	ch. Kanal Obry, n. t. Koscian
Leszczyńskie	16	13	47	r. Barycz, n. v. Niechlów
Lubelskie	6	—	20	r. Wisła, n. v. Wólka Profecka
Lubelskie	13	—	67	r. Wisła, v. Sulejów — v. Lopocžno

1	2	3	4	5
Lubelskie	16	—	67	r. Wieprz, v. Lancuchów — v. Trawniki
Lomzynskie	5	15	32	l. Rajgrodzkie
Lomzynskie	12	—	80	r. Narew, Biebrza, n. v. Sambory
Olsztynskie	10	—	24	r. Drweca, n. v. Samborowo
Olsztynskie	—	815	14	l. Karas
Olsztynskie	—	60	81	L. Szoby Male
Opolskie	—	1000	31	l. Otmuchowskie
Pilskie	—	30	6	l. Betyń
Pilskie	—	200	41	l. Borowno
Pilskie	—	200	12	l. n. t. Tuczo
Plockie	10	—	26	r. Ochnia, t. Kutno — v. Mirosławice
Plockie	12	—	11	r. Studwia, n. t. Zychlin
Plockie	10	—	6	r. Studwia, n. v. Biała
Poznanskie	10	12	60	l. r. Dojca, n. v. Kuznica Zbaska
Poznanskie	12	—	6	r. Obrzanski Kanal Poludniowy, n. v. Przemet
Poznanskie	10	443	17	r. Warta, l. p. n. t. Puszczykowo
Siedleckie	8	5	13	r. s. n. v. Zbuczyn Poduchowny
Slupskie	14	—	6	r. Biała, n. v. Drozonowo
Slupskie	—	190	43	l. Bobiecinie
Slupskie	17	100	507	r. Studnica, l. p. n. t. Miastko
Suwalskie	10	1000	150	r. Wegerapa, n. t. Wegerzewo, l. Oswin Mamry, Swiecajty
Suwalskie	9	300	423	r. Biebrza, r. a. n. v. Debowo
Szczecinskie	—	40	196	l. Liwia Duza
Szczecinskie	7	—	60	r. Krepa, n. v. Krepsko
Torunskie	12	—	32	r. Wisla, n. t. Grudziadz
Tarnowskie	10	—	4	r. Wisloka, n. v. Podgradzie
Wlodelawskie	8	80	300	r. l. n. v. Wola
Wlodelawskie	5	384	72	l. Gluszynskie
Wroclawskie	—	490	180	p. Radziadz
Wroclawskie	18	1300	156	r. Barycz, p. n. t. Milicz
Wroclawskie	—	780	204	p. n. v. Potasznia
Zielonogorskie	—	100	45	l. Chobienickie, l. n. t. Babimost

Month: March

Year: 1978

Viovodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Bialostockie	10	—	70	r. Nurzec, n. v. Bocki
Bialostockie	8	15	80	r. p. n. t. Bialystok
Bialostockie	5	4	191	r. Narewka, p. n. v. Bialowieza

1	2	3	4	5
Elblaskie	3	—	18	r. Wisła, n. v. Ostaszewo
Gdanskie	8	—	7	s. c. t. Władysławowo — v. Chalupy
Gdanskie	8	—	12	s. c. t. Władysławowo — v. Kuznica
Gdanskie	6	—	49	r. Wisła, v. Kieźmark — v. Swibno
Gorzowskie	28	—	40	r. Warta, v. Borek — t. Gorzów Wielkopolski
Kaliskie	15	—	200	r. Prośna, n. v. Ruda Komorska
Kieleckie	14	—	9	r. Nida, n. v. Wislica
Koninskie	5	—	19	r. Warta, n. t. Pyzdry
Koninskie	10	—	10	r. Warta, n. t. Turek
Krakowskie	11	10	1	r. Wisła, r. a. n. v. Wawrzenczyce
Leszczyńskie	7	2	26	ch. Kanal Obry, n. v. Bonikowo
Leszczyńskie	—	105	2	l. n. v. Wojnowice
Leszczyńskie	16	13	144	r. Barycz, n. v. Niechłow
Lubelskie	8	—	2	r. Wisła, n. v. Wólka Profecka
Lemzińskie	4	—	300	r. Narew, Biebrza, n. v. Sambory
Lomzińskie	14	—	93	r. Elk, Kanal Rudzki, n. v. Ruda
Opolskie	—	2000	1	l. Otmuchowskie
Opolskie	2	2000	12	r. Nysa Klodzka, n. t. Nysa, l. Nyskie
Piotrkowskie	17	8	5	r. Czarna, v. Rozenek — v. Ostrów
Poznańskie	10	443	41	r. Warta, l. p. n. t. Puszczykowo
Poznańskie	7	85	6	r. Welna, l. n. v. Jankowo Dolne
Poznańskie	—	100	34	l. n. t. Sieraków
Poznańskie	—	12	16	p. n. v. Chraplewo
Rodomskie	10	—	9	r. Pilica, n. v. Niemojewice
Siedleckie	7	1	5	r. s. n. v. Zbuczyn Poduchowny
Sieradzkie	15	3	4	r. Warta, n. v. Siedlatków
Sieradzkie	—	10	11	s. n. v. Ostrówek
Szczecińskie	14	35	491	r. l. t. Trzeńsko Zdrój — t. Chojna
Włocławskie	9	45	57	r. l. n. v. Wola
Włocławskie	—	720	36	l. Gluzińskie
Włocławskie	12	—	6	ch. Kanal Bachorze v. Sedzin — V. Ujma Duża
Wrocławskie	9	1300	298	r. Barycz, n. t. Milicz, p. Grabownica
Wrocławskie	—	780	520	p. Potasznia

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Warszawskie	—	500	3	a. l. Zalew Zegrzynski v. Debe — t. Zegrze
Bialostockie	13	—	73	r. Narew, n. v. Deniski
Bialostockie	8	15	30	r. p. n. v. Ogrodniczki
Bydgoskie	9	20	273	r. Gasawka, n. t. Znin, l. Zninskie
Chelmskie	7	—	25	r. n. t. Chelm
Elblaskie	3	—	14	r. Wisla, n. t. Ostaszewo
Elblaskie	1	80	3	r. Liwa, n. t. Prabuty, l. Liwieniec
Elblaskie	18	—	2	r. Pasleka, Drweca Warminska, n. t. Orneta
Gorzowskie	7	—	11	r. Mysla, n. t. Myslibórz
Gorzowskie	18	400	64	r. Warta, r. a. v. Borek — t. Gorzów wielkopolski
Katowickie	15	10	11	r. Klodnica, n. t. Ruda Slaska
Katowickie	16	120	20	r. Odra, p. n. v. Lubomia
Leszczynskie	10	—	46	r. Kanal Obry, t. Koscian — v. Bonikowo
Leszczynskie	8	—	75	r. Kanal Obry, n. t. Koscian
Lubelskie	13	200	1	r. Wisla, v. Sulejów — v. Lopoczno, p. n. v. Ciszyca
Lomzynskie	3	15	3	p. n. v. r., Mscichy
Opolskie	—	180	2	p. n. v. Tulowice
Opolskie	5	2000	18	r. Nysa Klodzka, n. t. Nysa, l. Nyskie
Piliskie	—	150	16	l. Betyn
Plockie	—	40	6	l. n. t. Kutno
Plockie	12	—	65	r. Studwia, n. t. Zychlin
Poznanskie	6	7	1	r. Wrzesnica, l. n. t. Czerniejewo
Poznanskie	5	70	32	r. Dojea, l. n. v. Kuznica Zbaska
Poznanskie	5	—	10	r. Obrzanski Kanal Poludniowy, n. v. Przemet
Sieradzkie	7	—	9	r. Grabia, n. v. Kozuby
Sieradzkie	—	60	29	s. n. v. Ostrówek
Slupskie	10	—	8	r. Leba, n. t. Lebork
Szczecinskie	3	—	18	s. c. Zalew Szczecinski, n. v. Jarszewko
Szczecinskie	8	220	80	s. c. n. v. Niechorze, l. Liwia Luza
Tarnowskie	10	—	1	r. Wisloka, n. v. Podgrodzie
Walbrzyskie	10	—	30	r. Krynkan. v. Przeworno
Wroclawskie	—	700	230	p. Radziadz
Wroclawskie	—	780	40	p. Potasznia
Wroclawskie	8	—	3	r. Odra, n. t. Olawa
Zielonogórskie	14	—	4500	r. Odra, n. v. Nietków
Zielonogórskie	15	200	5	r. Obrzyca, t. Kargowa — v. Uscie Stare, l. Rudzienskie

Voivodship	Length of the observed reach km	Observed area ha	Number of geese	Localization of studied waters
1	2	3	4	5
Bialostockie	12	—	3	r. Nurzec, Nurezyk, v. Nurzec — v. Bocki
Bydgoskie	10	—	22	r. Gasawka, t. Szubin — v. Dabrowka Slupska
Gorzowskie	—	150	60	l. Mysliborskie
Gorzowskie	15	30	60	r. Mysla, r. a. n. v. Sciechów
Gorzowskie	—	100	2637	l. Radun
Gorzowskie	6	7	74	r. Warta, n. t. Kostrzyn
Gorzowskie	18	—	85	r. Warta, v. Borek — t. Gorzów Wielkopolski
Katowickie	12	10	5	r. Klodnica, n. t. Ruda Slaska
Katowickie	10	5	16	r. Odra, p. n. v. Lubomia
Koninskie	4	—	470	r. Warta, n. t. Turek
Krakowskie	43	—	4	r. Wisla, t. Zator — t. Kraków
Leszczynskie	—	165	12	l. n. v. Wojnowice
Lubelskie	15	—	2	r. Wisla, v. Sulejów — v. Lopoczno
Lubelskie	18	—	15	r. Wieprz, v. Trawniki — v. Jaszczów
Lubelskie	14	—	13	r. Wieprz, v. Milejów — t. Leczna
Lomzynskie	5	—	21	r. n. v. Beldów
Opolskie	2	2000	14	r. Nysa Klodzka, n. t. Nysa, l. Nyskie
Opolskie	—	250	4	p. n. v. Tulowice
Opolskie	14	—	25	r. Odra, n. t. Brzeg
Opolskie	—	1900	100	l. Otmuchowskie
Ostroleckie	—	1	5	p. n. t. Ostrów Mazowiecka
Piliskie	—	160	27	l. Betyń
Piliskie	8	—	72	r. Notec, n. v. Ciszkowo
Plockie	10	—	52	r. Ochnia, t. Kutno — v. Mirosławice
Plockie	8	2	6	r. Studwia, n. v. Biala
Poznanskie	6	7	19	r. Wrzesnica, n. v. Czerniejewo
Poznanskie	8	150	12	r. Warta, l. p. n. t. Puszczykowo
Siedleckie	8	2	11	r. s. n. v. Zbuczyn Poduchowny
Sieradzkie	12	—	12	r. Bzura, n. t. Lowicz
Szczecinskie	12	—	24	s. c. n. v. Niechorze
Szczecinskie	12	—	80	r. Ina, t. Recz — t. Suchan
Wroclawskie	—	700	350	p. Radziadz
Wroclawskie	18	—	15	r. Odra, v. Malezyce — v. Pogalewo Wlk.
Wroclawskie	6	180	2	r. p. n. t. Niemodlin
Zielonogórskie	3	—	28	r. Nysa Luzycka, n. v. Zasieki

r. — river,
s. — swamp,
v. — village,

p. — pond,
t. — town,
l. — lake,

ch. — channel,
s. c. — sea-coast,
n. — near,

r. a. — riverian area,
a.l. — artificial lake.

1969—1980 were considered. Average temperature and thickness of a snow cover were obtained from the Monthly Agrometeorological Report of the Institute of Meteorology and Hydroeconomy (1969—1980), the data from question forms were also used.

Results

In every period of investigation (November, January and March) in the years of 1969—1980 migrating and wintering geese were observed in Poland. The points where geese were recorded and quantity of birds differed from year to year (Tabl. 1—2, Fig. 2.). A number of geese recorded on autumn migrations was bigger than during spring migrations, and both figures did not differ considerably in different years. It seems that since 1977 the number of geese in November was bigger than in previous years.

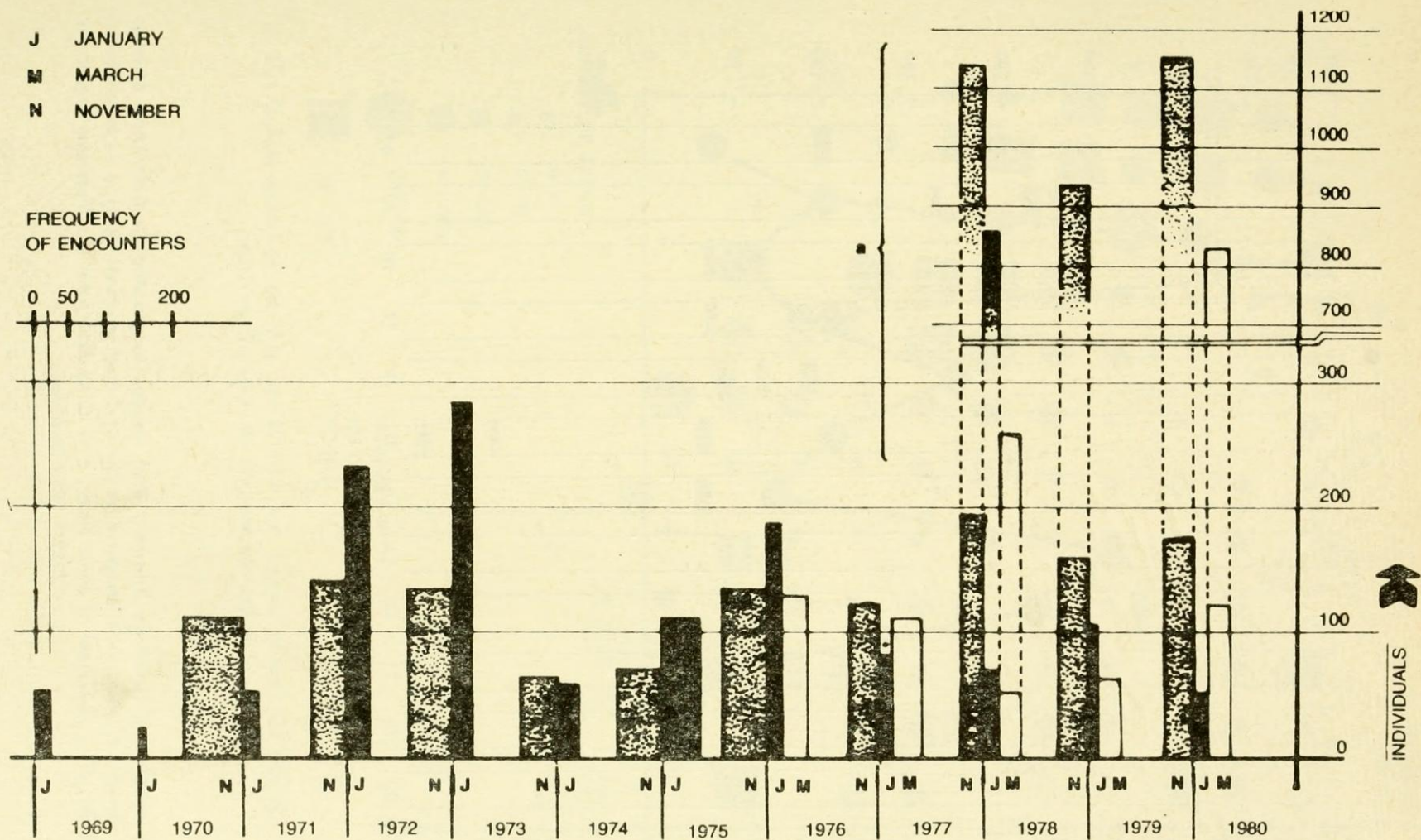
The number of wintering geese vary in different years much more than the number of migrations ones. It seems that since 1972—1973 a decrease in number of wintering geese has been recorded. Year 1978 formed an exception. A big concentration of geese occurred on the Kostrzyn Reservoir. Geese were least frequently observed in January, most commonly in November (in spite of similar numbers of observers).

There is no evidence of a direct relationship between the number of wintering geese and an average temperature of the week when the observation was made or average thickness of snow cover of the month, when these two factors are taken separately (Fig. 3.). It seems however that if both factors are considered the influence of climatic conditions can be observed. Small amounts of wintering geese are connected with either low temperature (average below -1.5°C), or with thick snow cover (average above 10 cm). A small number of geese in 1974 and 1975 in spite of relatively high temperature and thin snow cover was an exception.

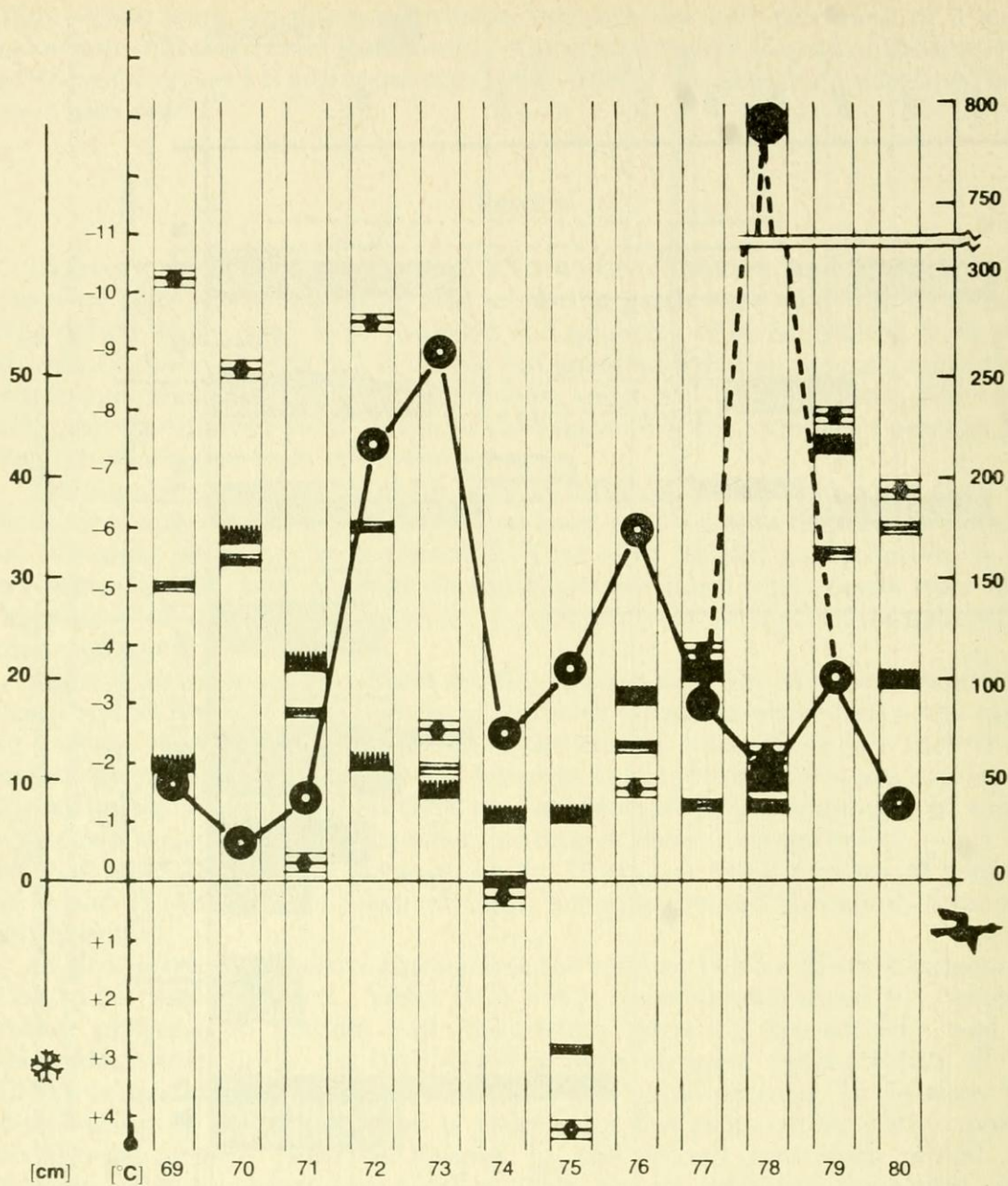
In November geese occur throughout the country, with a distinct concentration in its western parts. Years 1970—1974 were characterised by concentration of geese in middle and midwestern parts of the country and in its southeastern parts. In 1975—1979 a little stronger concentration of big flocks in western and southwestern parts of Poland occurred. In January the distribution of wintering geese is practically the same—concentration points occur in western parts of Poland. In the second five-years period the number of these points was smaller. This can be probably correlated with generally smaller amount of wintering geese in Poland in these years (Fig. 3.). In March two areas of concentration can be distinguished: the bigger one in middle and western part of the country and the smaller one in mideastern region.

Both during fall migrations (mid-November) and during wintering (mid-January) distinct concentrations of geese were observed in the following Natural Regions: Pojezierze Pomorskie (Pomeranian Lake District — II), Pojezierze Wielkopolskie (Wielkopolska Lake District — IV), Nizina Wielkopolska (Wielkopolska Lowland — VII)

In November smaller concentrations were also recorded in the following regions: Pojezierze Mazurskie (Masurian Lake District—III), Wyzyna Slaska and W. Krakowsko—Czestochowska (Silesian and Cracow-Czestochowa



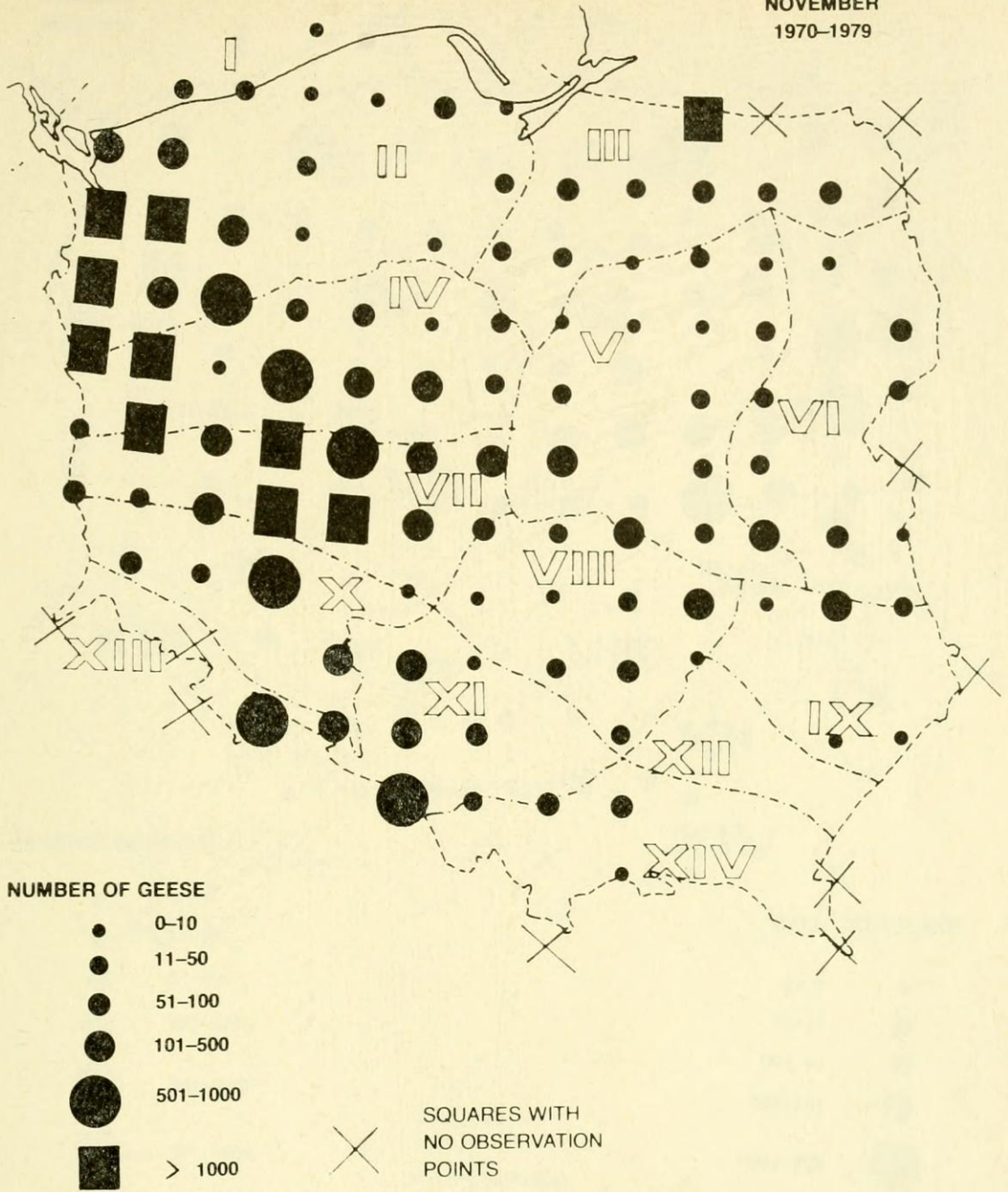
2. Avera genumber of frequency of encounters (frequency represented by the width of a symbol — 1 mm equals 6 en — counters).
a — with data from the Kostrzyn Reservoir from 1977—1980 included



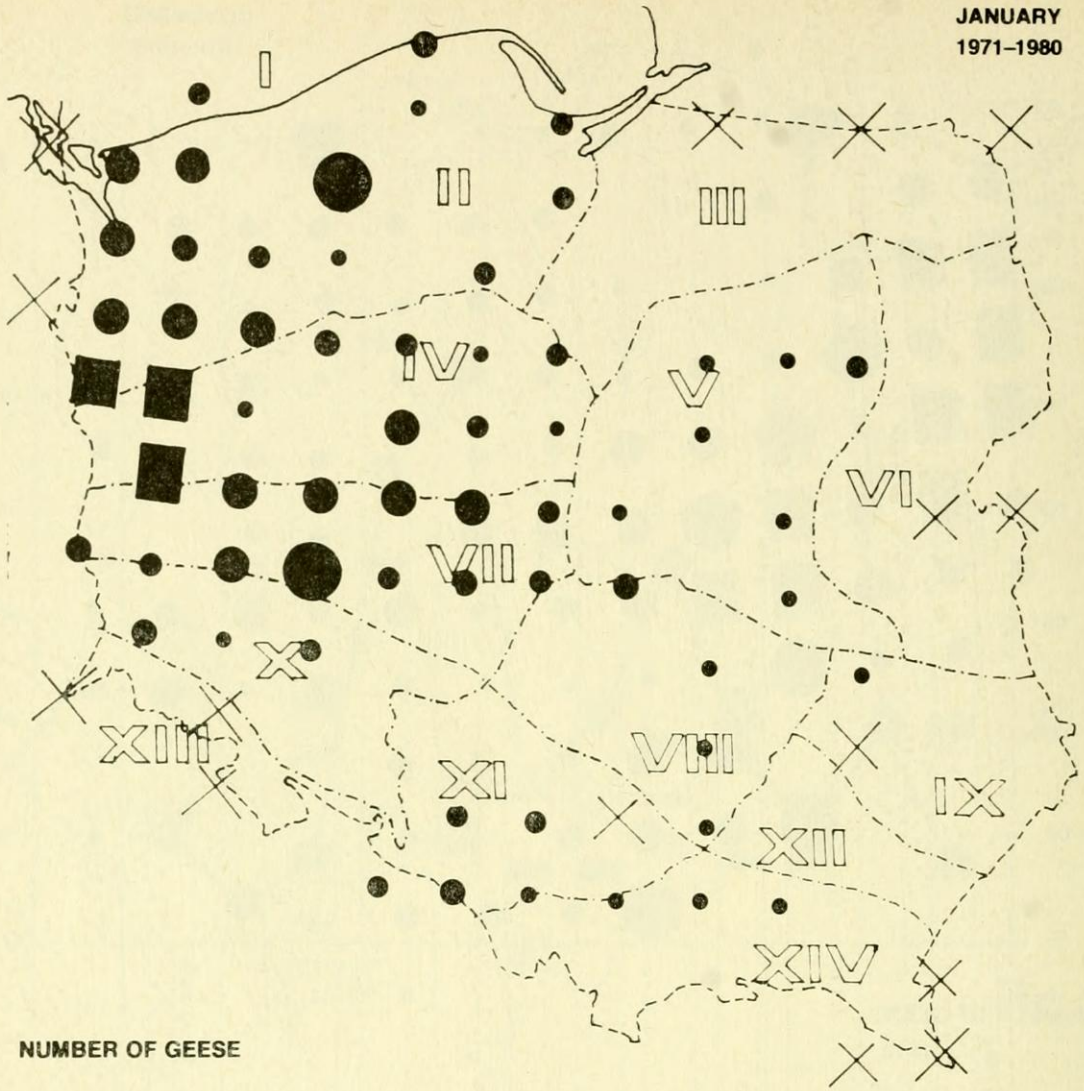
- a ●
- b —
- c —
- d —
- e ●

3. Average number of geese in January and average temperature and thickness of snow cover. a — number of geese, b — temperature (printed meteorological data), c — temperature (own research), d — thickness of snow cover, e — with data from the Kostrzyn Reservoir 1977—1980 included

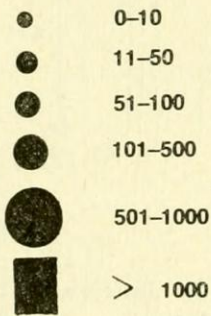
NOVEMBER
1970-1979



4. The highest values of counting per 50×50 km² compared with the division of Poland into Nat. Regions (the Regions marked as on IV/I)



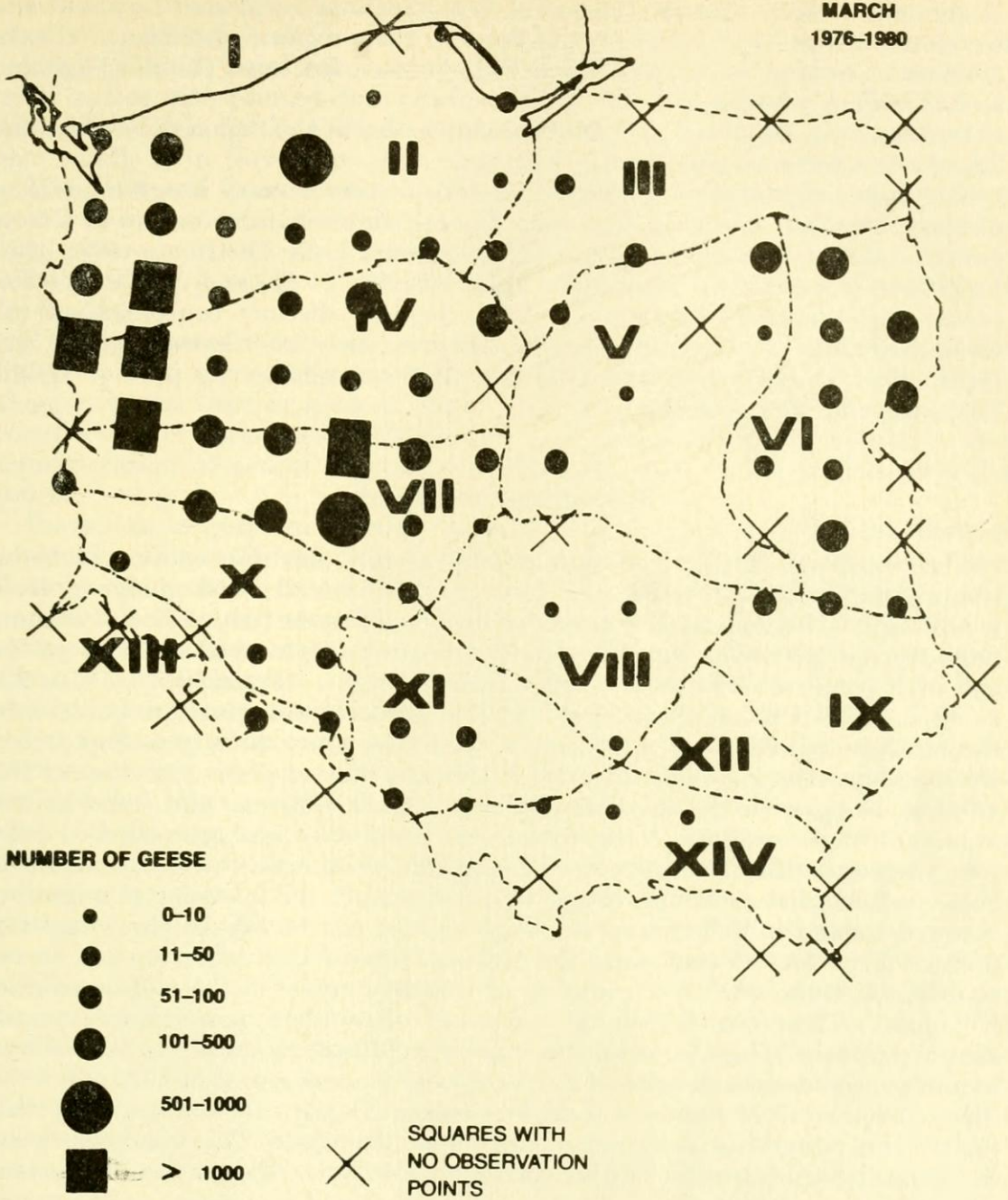
NUMBER OF GEESE



X
SQUARES WITH
NO OBSERVATION
POINTS

5. The highest values of counting per $50 \times 50 \text{ km}^2$ compared with the division of Poland into Nat. Regions (the Regions marked as on IV/1)

MARCH
1976-1980



6. The highest values of counting per $50 \times 50 \text{ km}^2$ compared with the division of Poland into Nat. Regions (the Regions marked as on IV|1)

Highlands — XI), Nizian Slaska and Wal Trezbnicki (Silesian Lowland and Trzebnica Ridge— X), and on the border of the regions of Nizian Podlaska (Podlasie Lowland — VI) and Wyzyna Lubelska i Roztocze (Lublin Highland and Roztocze — IX).

In January a small isolated center remains also in the region of Silesian and Cracow-Czestochowa Highlands (XI).

The disposition of geese in March reminds of the January image more than of the November one (Fig. 6) — the biggest concentrations occur in the regions of Pojezierze Wielkopolskie (Wielkopolska Lake District — IV), then Pojezierze Pomorskie (Pomeranian Lake District — II) and Nizina Wielkopolska (Wielkopolska Lowland — VII). Another distinct concentration (although smaller in quantities than in the previously mentioned regions) was recorded in Podlasie Lowland (VI) and in the neighbouring part of Lublin Highland and Roztocze (IX).

Discourse of the Results

The changes in the average number of geese (per one observation point) during migrations and wintering in Poland (Fig. 2) form a basis for judging on some biological phenomena. November countings cover the final period of autumn migrations of geese through Poland, that begin in September and last till the end of November (*Sokolowski*, 1958; *Dzieciolowski — Frankiewicz*, 1970; *Tomialojc*, 1972; *Ferens—Wasilewski*, 1977). These observations probably miss the nesting population of *Anser anser*, that flies away already in September. Presumably, *Anser fabalis* constitutes the majority of geese recorded in November, along with the smaller number of *Anser albifrons* and some limited amount of *Anser anser*. Variations in the number of birds recorded in different years can either be interpreted as a result of changes in total amount of geese in Europe or as being related to differences in the intensity of migration through Poland in different years what in turn can be due to changing time of migrations. In different years the maximal intensity of migration can occur at different time, while our counting is invariably done in the middle week of November. Therefore the annual variations of numbers must be interpreted very cautiously. Thus we claim no important difference between annual amounts of geese occurred before 1976, in spite of some decrease in 1973 and 1974. Since 1976 the total numbers tend to increase (Fig. 2). It is noteworthy that in the same period the frequency of encounters decreased. This indicates geese are grouping in bigger flocks (this corresponds with the disposition of maximal concentrations shown on).

In the last few years a new important point of concentration emerged, where geese stop by on migrations. According to the information obtained by letters from *Mr. P. Majewski*, *M. Sc.*, eng., on the Kostrzyn Reservoir near Slonsk the records were: 36 000 geese on 4—6 Nov. 1977 (including 470 *Anser anser*, 35 000 *Anser fabalis* & *albifrons*); 35 000 geese on 7—9 Nov. 1978 (800 *Anser anser*, 6000 *A. albifrons*, 29 000 *A. fabalis*); approximately 40 000 geese on 9 Nov. 1979; 44 600 geese on 14—17 Nov. 1980 (1600 *Anser anser*, 43 000 *Anser albifrons* & *fabalis*). The records in former years reached 3000—6000 individuals on corresponding dates.

March countings cover both migration period and the nesting population of

Anser anser. We suppose that rather small nesting population can not affect the results considerably, so the data obtained accord most of all to the number of migrating birds. Total number of geese observed is smaller than in autumn, what agrees with printed data (Sokolowski, 1958; Dzieciolowski—Frankiewicz, 1970; Tomialojc, 1972; Ferens—Wasilewski, 1977). Annual variations are rather small, as in November. The frequency on encounters is less than in fall.

The Kostrzyn Reservoir near Slonsk remains an important concentration point, as in autumn. According to Mr. Majewski's data the records were: 7350 geese on 15—17 Mar. 1978 (550 *Anser anser*, 3200 *A. albifrons*, 3600 *A. fabalis*); 25 000 geese on 19—20 Mar. 1978 (350 *A. anser*, abt. 25 000 *A. albifrons* & *fabalis*).

Alike the case of autumn migrations the variations of annual record can either be interpreted as representing changing total number of geese in Europe, or changes in the time or path of migration. Nevertheless, as spring migrations cover a shorter period than autumn ones, we are more inclined to treat in as a representation of actual changes in number of geese in Poland in particular years.

Variations in quantity of birds observed in mid-January reflect the state of geese wintering in Poland. The differences are much bigger from year to year than in spring and autumn, and it seems that after a rapid growth in 1975 numbers tend to decrease. The frequency of encounters is much less than in spring and fall, what means geese are wintering in rather few big aggregations. Thus, if no information comes in from a few or even one for the points were observed previously, an influence on final figures can be considerable.

For instance, an average amount of geese per a point of observation in 1978 raises from 68.7 up to 775.6 when the data from the Kostrzyn Reservoir are included (Fig. 2—3) (this data has been obtained by letters from Mr. Majewski M. Sc., eng. since 1978. Previously information from the area had come through regular question forms, but seized to come in 1975). It must not be forgotten, though, that Mr. Majewski's information does not refer to the middle week of January, but to the beginning of the month. The counting was done on 5—7 Jan. 1978. 13 500 individuals were recorded, including 3500 *Anser albifrons* and 10 000 *Anser fabalis*. In January 1979 and 1980 there were no geese on the Kostrzyn Reservoir. The amounts recorded in 1971, 1972 and 1975 were respectively 120, 4000 and 2800 individuals. The data obtained from Mr. Majewski are then another proof to our previous conclusion about big differences in the amount of geese in January in particular years. It seems interesting, that the variations in the amount of geese in November (although lesser) generally correspond to the ones in January. This can indicate a coincidence of the number of geese migrating through Poland in November and the amount that stays for winter (Fig. 2).

One can suppose there is also a coincidence of quantity of geese wintering in Poland and severity of winters. Thus an attempt was made to correlate the number of geese (in January) with average temperature and thickness of snow cover, but no apparent result was obtained. It should be noticed however that small numbers of geese (years 1971, 1974, 1977, 1980) correspond with either low average temperature or thick snow cover.

Distribution of concentrations of geese in mid-November and mid-March can be interpreted as a static reflection of paths of their migrations, or more accurately as a disposition of the areas where they halt on the course of migra-

tions. As spring migrations last shorter than autumn ones (end of February — beginning of April in spring, September, October, November in fall) (*Sokolowski*, 1958; *Dzieciolowski—Frankiewicz*, 1970; *Tomialojc*, 1972; *Ferens—Wasilewski*, 1977), one may expect that the image acquired in March represents the actual routes more accurately than the November one. Anyhow, it can be stated that in November geese are dispersed throughout the country (Fig. 4), more densely in northern, western, middle and southwestern areas. This proves the opinion already expressed in print (*Dzieciolowski—Frankiewicz*, 1970), that the geese migrations generally go on following the „wide front“ pattern, but the following regions are preferred; Pojezierze Mazurskie (Masurian Lake District — III), Pojezierze Pomorskie (Pomeranian Lake District — II), Pojezierze Wielkopolskie (Wielkopolska Lake District — IV), Nizina Wielkopolska (Wielkopolska Lowland — VII), Nizina Slaska i Wal Trzebnicki (Silesian Lowland and Trzebnica Ridge — X), Wyzyna Slaska i Krakowsko—Czestochowska (Silesian Highland and Cracow—Czestochowa Highland — XI). This means the migrations intensify in the area of Oder, Warta and upper Vistula river valleys, with the mountains being crossed through the Moravian Gate (a broad pass between the Carpathians and the Sudety Mts.). These conclusions generally agree with printed information (*Sokolowski*, 1958; *Bochenski—Harmata*, 1962; *Dzieciolowski—Frankiewicz*, 1970; *Ferens—Wasilewski*, 1977) and enable to define the routes of autumn migrations more precisely.

An image of spring migrations differs from the fall one. Supposedly, there are two main routes (Fig. 6). One resembles the autumn one and goes through western and midwestern parts of the country and through the Moravian Gate. The other one crosses the eastern part of Poland going along the Bug river and then strait north. This path resembles the route taken by cranes on their spring migrations (*Pinowski—Sierakowski—Wolanski*, 1969) which can be explained by similar environmental needs on the course of flight.

In winter geese concentrate mainly in western and midwestern parts of Poland (Fig. 5). The areas where wintering geese concentrate are marked by both a big amount of water courses and reservoirs and a relatively moderate climate (average temperature in January usually does not drop below -2°C , while in the neighbouring Masurian Lake District the average is -4°C to -5°C . The Atlas of Poland 1974; *Kostrowicki*, 1961).

Concluding, most of geese wintering in Poland group in few big aggregations in western part of the country. The number of wintering geese changes from year to year and seems to depend on the quantity of birds flying through Poland on an autumn migration and on severity of a winter.

During mild winters this number can be estimated at about 15 000 individuals.

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