

INLAND WADER COUNTS - FIRST PROGRESS REPORT

by OAG Münster

Count data for 1980 is now quite complete (except for the British Isles) allowing production of a somewhat more comprehensive report on the project than that in WSG Bulletin No. 31. It is apparent from the map (Fig. 1) that the number of counting sites has increased since 1979. There will be a further increase in 1981, especially in France and the Netherlands. The information about the locations and numbers of the British sites have not yet reached the Biologische Station in Münster.

The organisational work for the Inland Wader Counts has been improved for 1981 by finding two additional national coordinators: in France all data forms, questions etc. should be directed to Alain Sauvage, 14 Porte de Bourgogne, 08000 Charleville-Mézières, France; in the Netherlands to Arend v. Dijk, Ootmandijk 1, 7975 PR Uffelte, The Netherlands.

1980 was the first year in which counts were made throughout most of the period when wader migration occurred inland. However, the data can not yet yield any representative results, the period of counting being still much too short. The purpose of this paper is to give an impression of the differences which might exist between the migration patterns of waders at different sites. As examples several frequency patterns of Ruff *Philomachus pugnax*, Wood Sandpiper *Tringa glareola* and Black-tailed Godwit *Limosa limosa* at different sites are given, and the species communities at a number of sites with different habitats are shown.

Frequency patterns

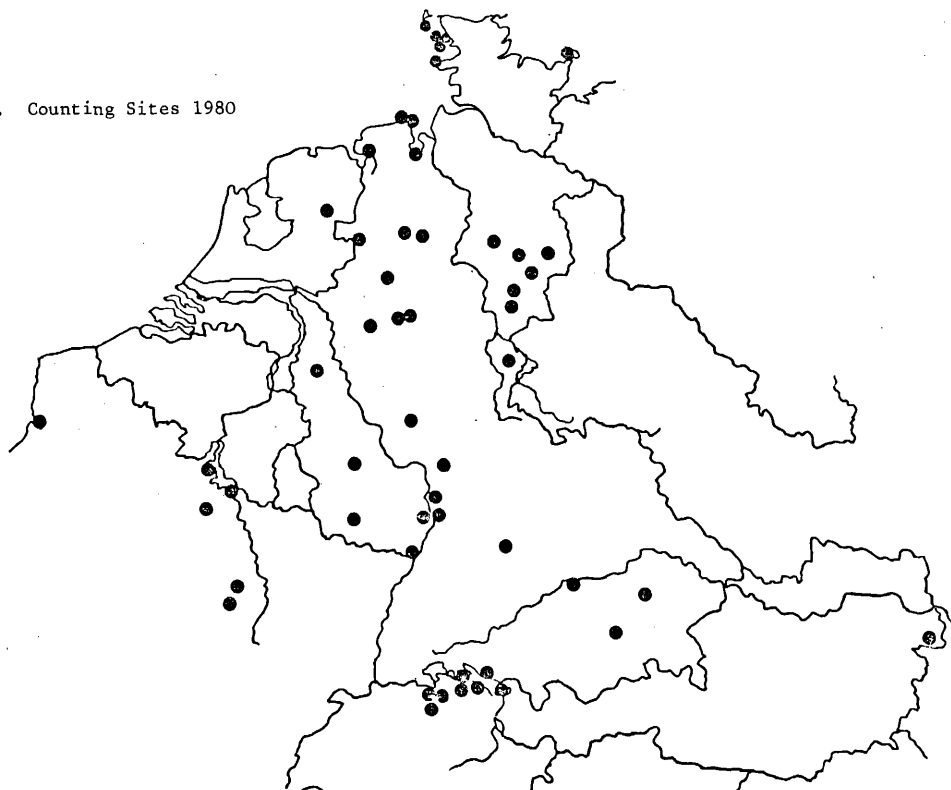
The sites chosen for analysis usually held enough waders to produce "reasonable" frequency patterns for the given species for one year. For the smaller sites this will be possible by combining data from some more years.

The data on Ruff from Ochsenmoor/Dümmer and Klärteich Salzgitter-Heerte (Fig. 2) provide a very marked example of the differences in the distribution of resting numbers of waders at different sites (habitats). Even when account is taken that the information about resting numbers at the Ochsenmoor in July are incomplete it can clearly be seen that at this site the spring figures are much higher than those for summer-autumn. In Salzgitter the situation is reversed. Both sites are situated in Lower Saxony in Northern Germany, the distance between them being some 150 km. The Klärteich Salzgitter-Heerte is a 270 ha basin supplied with the only poorly nutritive run-off from an ore mine and always provides mudflats and shallow water areas as resting grounds for waders throughout most of the year. The Ochsenmoor is an area of wet meadows with a lot of temporary pools - partly artificially flooded - which the Ruffs tend to rest near. These meadows are much drier in summer and areas of open water are almost completely absent. Apart from many Lapwings *Vanellus vanellus* only a few waders can be found there at that time.

The frequency patterns of Wood Sandpipers were quite similar at a range of sites (Fig. 3). With the exception of Überschlickungsgebiet Riepe (the figures there probably only represent the scarceness of that species at that site near the coast) the small differences between the diagrams may partly be explained by differences in the availability of suitable mudflats as resting grounds. At nearly all sites a bimodal distribution of resting numbers in summer and autumn could be found which may be referred to different migration phases of adult and young birds. There did not seem to be other than minor differences between migration times at northern and southern sites.

Frequency patterns of Black-tailed Godwits were quite variable (Fig. 4). The salt lakes near the Neusiedlersee, Austria, are a resting site for migrating godwits whilst Dwingelose and Kraloer Heide, Netherlands, form a postnuptial roost. At Ochsenmoor it was mainly the individuals breeding nearby which were counted - in late summer almost no Black-tailed Godwits could be found there. The Sewage Farms of Munster serve as a resting site for migrating birds as well as a feeding site visited regularly by godwits breeding on meadows up to 40 km from the sewage farms. These individuals stay only for some hours each time, so the daily resting numbers change remarkably.

Figure 1. Counting Sites 1980



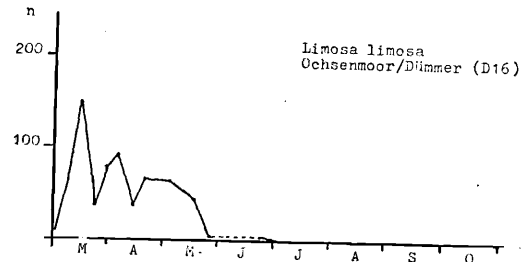
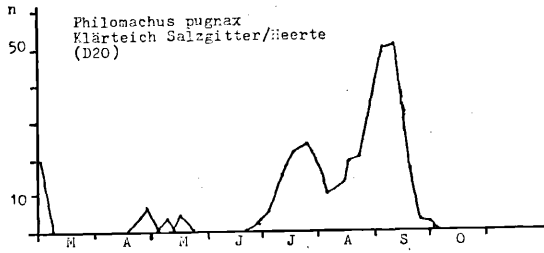
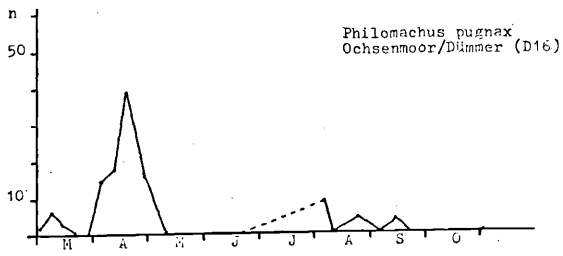


Figure 2. Counts of Ruff at two sites in 1980

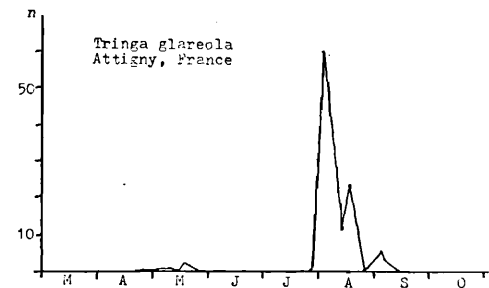
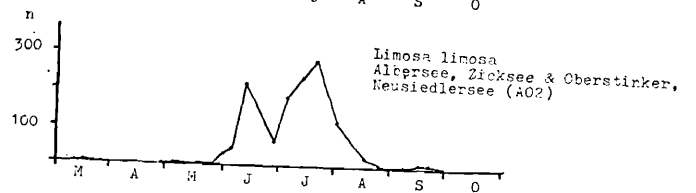
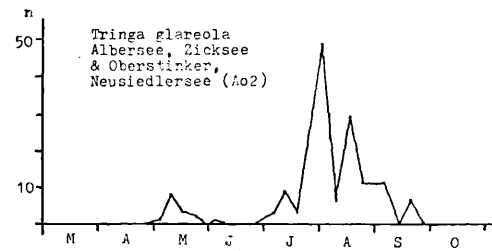
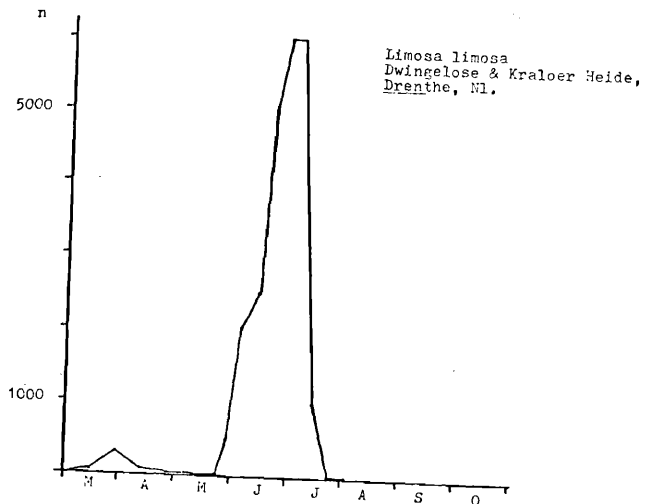
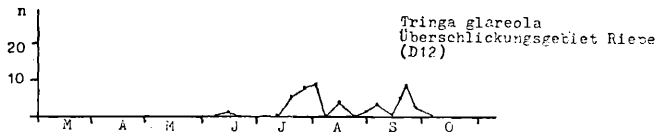
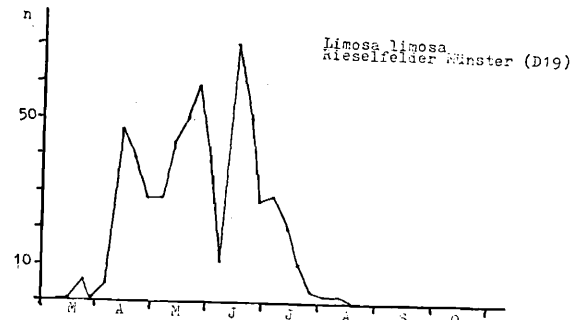
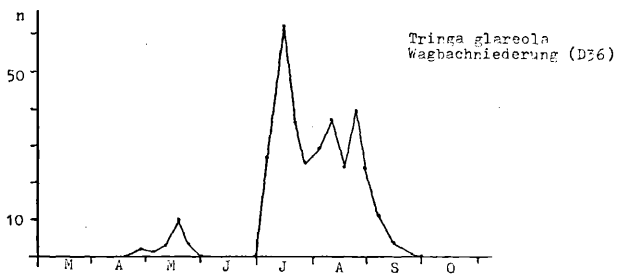


Figure 4. Counts of Black-tailed Godwits at four sites.

Figure 3. Counts of Wood Sandpipers at various sites.

Composition of wader communities

The last diagram (Fig. 5) is to give an example of the relative frequencies of wader species at different sites. To allow comparisons, data from August 1980 only are used, this being when most wader species occurred in maximum numbers in the region concerned. The heights of the columns indicate the proportions of numbers counted for the species compared with the total number counted at those sites in August. The sites are given on the line above the diagram:

- 1) Pellworm; counts at a high tide roost in the North Friesian Waddensea; mean number of waders per count in August: 8683.
- 2) Elisabeth-Aussengroden; Waddensea north of Wilhelmshaven; number per count: 4590.
- 3) Überschlickungsgebiet Riepe; 100 ha of basins mostly free of vegetation where mud and sand from the nearby Ems estuary are deposited; number per count: 1984.
- 4) Klärteich Salzgitter-Heerte, Lower Saxony; a 270 ha basin for the washings of an ore mine, few nutritive substances, size of mudflats and low water zones: 70-120 ha; number per count: 271.
- 5) Albersee, Zicksee and Oberstinker at Neusiedlersee, Austria; about 200 ha of periodic salt lakes; number per count: 280.

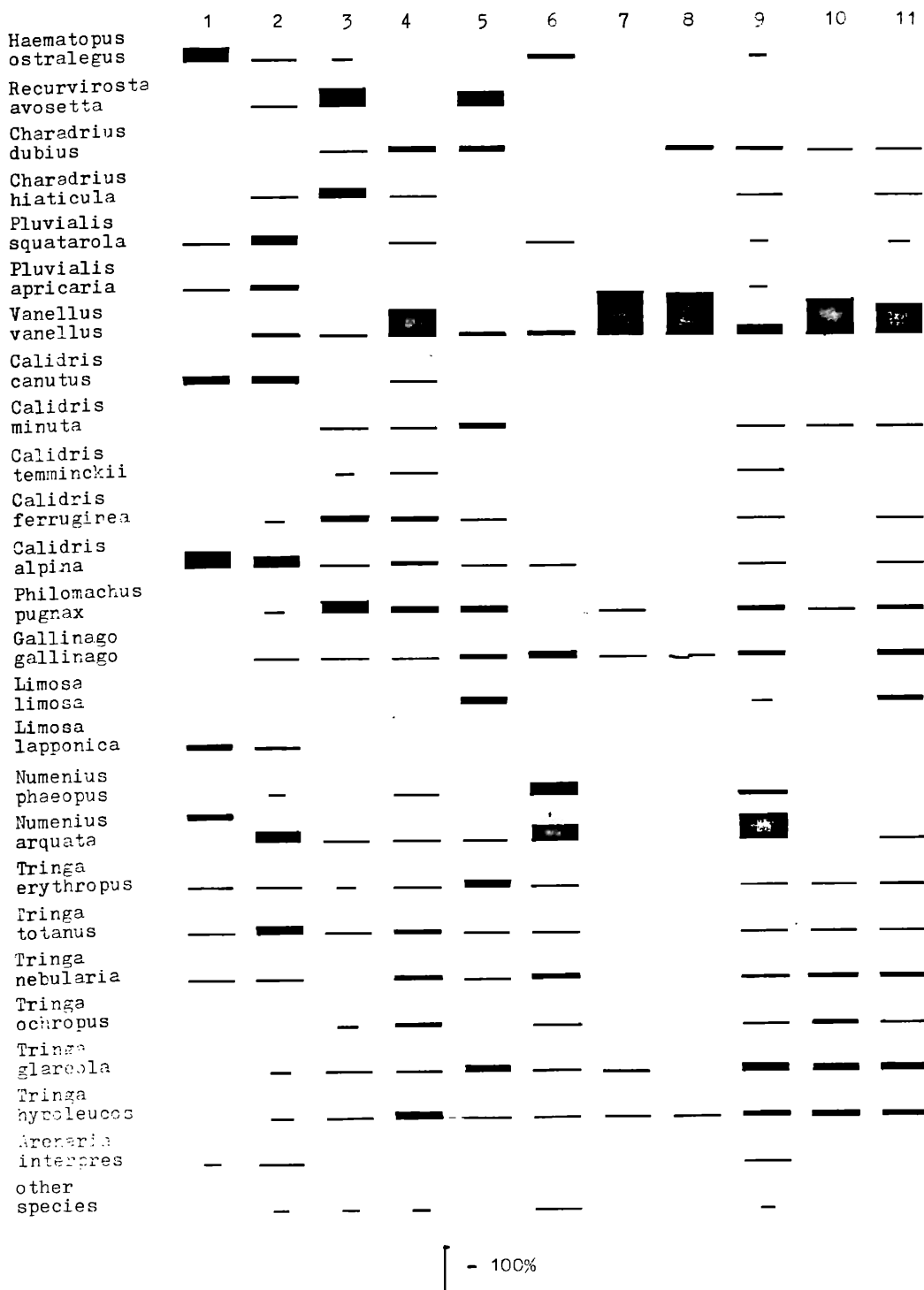


Figure 5. Relative frequencies of wader species at different sites (see text).

- 6) Dwingelose and Kraloer Heide, Netherlands; 1500ha of moorland with numerous ponds; number per count: 128.
- 7) Ochsenmoor, Dümmer, Lower Saxony; a part (some 100 ha) of a wet meadow area with only few wet places in August; number per count: 562.
- 8) Baggerweihergebiet Nennig-Besch and adjoining Moselle; some 125 ha of gravel pits with the adjoining bank of the River Moselle; number per count: 106.
- 9) Rheindelta am Bodensee; some 10 km² of different wetland habitats at the mouth of the river Rhine in Lake Constance; number per count: 872.
- 10) Rieselfelder Braunschweig, Lower Saxony; municipal sewage farms, size some 30 ha; number per count: 99.
- 11) Attigny, France; about 20 ha of clearing basins of a sugar-mill; number per count: 311.

The value of the diagram is limited because the data originate from only one migration period (1980) and because only relative and no absolute frequencies are indicated by the heights of the columns. Consequently a given species forming a high percentage of all registered waders at a small site might be much scarcer there than at a large resting site where this species forms a relative small part of all resting waders.

Nevertheless, some differences and similarities may be seen from the figures. The compositions of the wader communities at the coastal sites are distinctly different from those of the inland sites. Apart from the Curlew *Numenius arquata* no species dominant at the coast occurs at inland sites in relative frequencies worth mentioning and vice versa.

The relative frequencies of wader species at the three "sewage-sites" Attigny (11), Braunschweig (10) and Salzgitter-Heerte (4) were similar: Lapwings were most numerous and the proportions of *Tringa* sandpipers were quite high, too. The species diversities were lowest at the gravelpit site (8) and at the wet meadow site (7) (which is dry in August); at both sites more than 90% of the counted waders were Lapwings.

These results, too, have to be supported by continuing the studies in future years.

OAG Münster, Biologische Station Rieselfelder, Coermühle 181, 4400 Münster, Federal Rep. of Germany.

ADDENDUM

Count sites in Great Britain are: Threipmuir Res. (Midlothian); Wath Ings (Yorks) Dobbinshaw Res. (Midlothian); Crosswood Reservoir (Midlothian); Harperrig Reservoir (Midlothian); West Water Reservoir (Peebleshire); Gladhouse Res. (Midlothian); Stanford Reservoir (Leicestershire/Northants boundary); Abberton Reservoir (Essex); Minsmere (Suffolk); Blithfield Reservoir (Staffordshire); Alvecote Pools Nature Reserve (Warwickshire/Staffordshire); Fairburn Ings (N.+W. Yorkshire); Belvide Res. (Staffordshire) and Upper and Lower Bittell Reservoirs (Worcs).

RESULTS OF TWENTY YEARS OF WADER RINGING AT THE MOUTH OF VISTULA IN POLAND

by J. Gromadzka

The area of the mouth of Vistula was, for many years and until quite recently, the only place in Poland where regular wader ringing was carried out. In the last few years the ringing of these birds has started in some other places (see WSG Bulletin 31).

The area at the mouth of Vistula was and still is one of rare places along Polish Baltic coast where large numbers of wader concentrate during autumn. It should be remembered that along non-tidal Polish coast there are no wide flat areas as suitable for waders as e.g. the Waddenzee and some British estuaries. The maximum counts made during autumn at the mouth of Vistula have shown ca 1000 waders at one time (Dunlins *Calidris alpina* and Grey Plovers *Pluvialis squatarola* in the middle of October 1978).

The first wader catching in this area was started in 1960 by students of Warsaw Biological Club - initiators of Operation Baltic, the organization carrying out research on migrating birds (mainly passerines) along the Baltic coast. In years 1964-1967 the ringing was organized by the Ornithological Station of Gdansk, in years 1969-1975 by Operation Baltic, and since 1976 again by Ornithological Station.

In the past the area around the mouth has changed very much. In the 1960s at the right side of the mouth there were sandy islands and peninsula, changing their size and site, sometimes joining into a spit and finally forming a permanent connection with the mainland, giving rise to a lake. After some time the water in the lake has become fresh and the lake shore has been covered gradually with vegetation. At the left side of the mouth the similar changes have been observed. Now there are very wide sandy flats of variable sizes and big bird numbers have gathered there: during the breeding season, mainly terns; during the summer and autumn, gulls, terns, ducks, waders and others.

The right side of the mouth of Vistula near Mikoszewo (54.21 N, 18.57 E) appeared exceptionally suitable place for wader catching in traps during autumn migration. The traps were placed at first on the peninsula shore and next on the lake shore where relatively large wader numbers fed. In the 1970s the birds were caught each year in ca 20 traps (similar to those used in Ottenby Bird Observatory) placed along ca 2 km of sandy lake shore. The trapping was carried out from the beginning of or mid July to some time in September. The traps were checked each day, every second hour. In 1980 the catching was stopped in the end of July because of very low numbers of waders and because of a flood of the Vistula at the end of the month. It was the last year of wader catching in the right side of the mouth. The area has been covered with vegetation (willow, reed and other plants) so that it has lost its attractiveness for waders. The results of twenty years of wader catching at the mouth of the Vistula are shown in Table 1.