

SUMMARY

Szlama D., Ostański M., Profus P. The avifauna of the Dzierżno Duże Retention Reservoir in the Upper Silesia. Part 3. The importance of the reservoir and its surroundings for migrating and wintering birds.

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Dzierżno Duże, a retention reservoir situated 7 km to the north-west of the town center of Gliwice in the Kłodnica river valley in the Odra drainage basin, was a place of many-year observations of the avifauna. The reservoir was created in 1964 as a results of filling-up with water surface excavations that remained after a sand-pit existing from 1937. Excavations were filled with Kłodnica river waters and underground waters which were pumped to the Gliwice Chanell when the san-pit was active.

The Dzierżno Duże reservoir covers about 620 ha. It has a total capacity of 87 million m³ and a depth to 20 m. It is elongated in shape (5,5 × 1,2 km) and characterised by large oscillations of water table typical of retention reservoirs, a little differentiated shore line, long beaches and the poor waterside vegetation. It feeds the Gliwice Channel making it navigable. It fulfils the role of a sewage settlement tank for the Kłodnica river, collecting municipal and industrial wastewater, and coal mud.

The climate of Dzierżno Duże is characterised by high weather variability and temperature oscillations, and mild winter. Climatic winter lasts shorter than a month; number of days with frost is about 100 and number of days with snow cover almost 40. A degree of freezing of the reservoir is much differentiated.

Dzierżno Duże, a retention reservoir in the Upper Silesia, S Poland, has already been presented as an important area for wintering waterfowl. The paper summarizes 24-year period censuses of migrating and wintering birds (1983–2006). 228 bird species have been recorded at the lake and the close surrounding, among them 93 marsh and water birds. It puts the reservoir in row with the richest in number of migrating bird species retention lakes in Poland like:

Jeziorsko, Wonieść and Mietków. Dzierżno Duże compared to them presents with lower numbers of species and flocks size of most birds, but: Cormorant (*Phalacrocorax carbo* in autumn to 2000 birds, spring – to 560 birds), Black-necked Grebe (*Podiceps nigricollis* – in spring 560 birds, in autumn – 620), Pochard (*Aythya rufina* – in spring 1505 birds, in autumn – 1527), Tufted Duck (*Aythya fuligula* – in spring 3900 birds, in autumn – 1750), Goldeneye (*Bucephala clangula* – in spring 300 birds), Smew (*Mergus albellus* – in spring 3000 birds), which flocks were the biggest in Central and South Poland. Also big flocks of Shoveler (*Anas clypeata* – in spring 250 birds, in autumn – 810), Wigeon (*Anas penelope* – in spring 400), Common and Velvet Scoters (*Melanitta nigra*, *Melanitta fusca* – both in autumn to 20–21 birds), place Dzierżno Duże among the most important for waterfowl areas in inland (Fig. 1–32). Due to it's origin (former sand-pit, tided with water), it's big deep and steepy banks, the lake is not important and attractive for Sandpipers and Plovers (*Charadriiformes*). For Great Crested Grebe (*Podiceps cristatus*), Bean goose (*Anser fabalis*), Mallard (*Anas platyrhynchos*), Teal (*Anas crecca*), Pintail (*Anas acuta*), Long-tailed Duck (*Clangula hyemalis*), Coot (*Fulica atra*) and gulls from Herring/Yellow-legged group (*Larus argentatus mihachellis*) the importance of Dzierżno Lake is comparable to that of other medium-sized retention reservoirs of S Poland, like: Świerklaniec, Rybnik, Łąka, Rzeszów, Poraj.

Summarizing, for more than 40 years of existence Dzierżno Duże Retention Reservoir became an important area for migrating waterfowl in South Poland, and as such should be at least partly protected, i.e. anthropopression put on the lake should be controlled and limited, especially the industrial installations for digging mud consisting coal at the east end of the lake, as well as investments for tourism and recreation at it's west bank.