15 years of monitoring of 'large' gull species in central and northern Moravia, Czech Republic

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1. Study areas and methods

The study of large gull occurrence took place in two areas (Fig. 1). The first is the relatively natural landscape of central Moravia (left-hand rectangle) in the upper Morava river valley, which is dominated by fields and meadows. Sites indicated of particular interest are the Šumvald fish-pond (1), the Chomoutov gravel-pit (2), the Tovaeov fishponds (3) and the Záhlinice fish-ponds (4). The second area is the industrial area of the Ostrava-Karvina region (right-hand rectangle), which contains mainly artificial habitats typical of a coal-mining landscape. The primary counting sites were at the regular gull roosts at Doubrava industrial lake

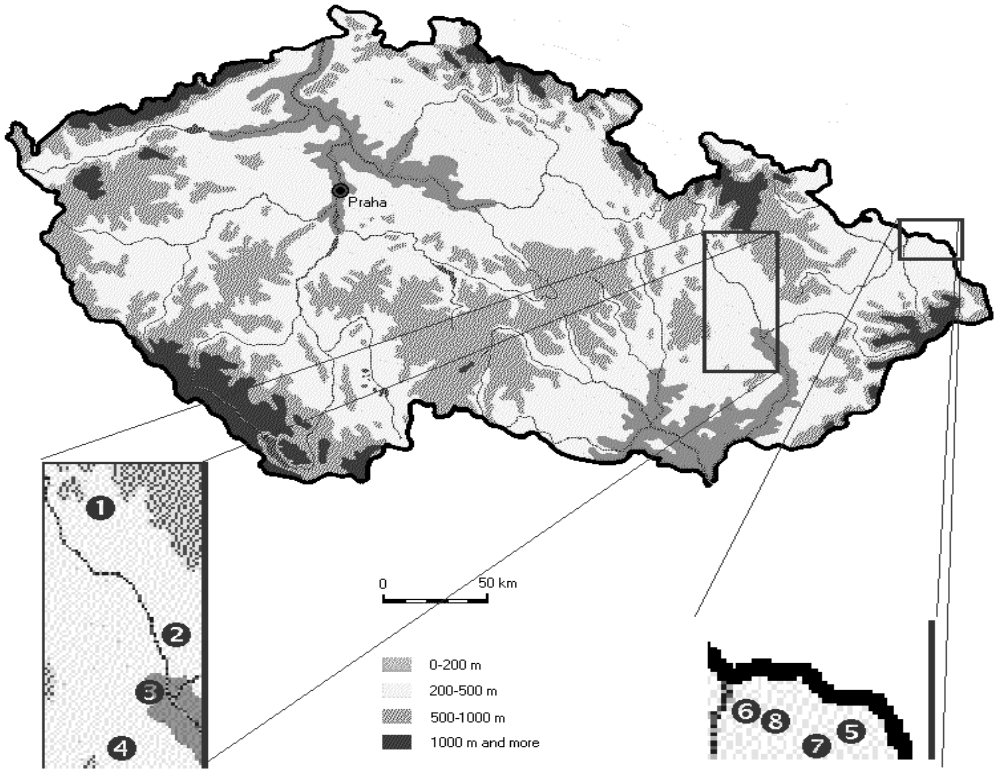

Fig 1. Study areas in the Czech Republic. See text for explanations.

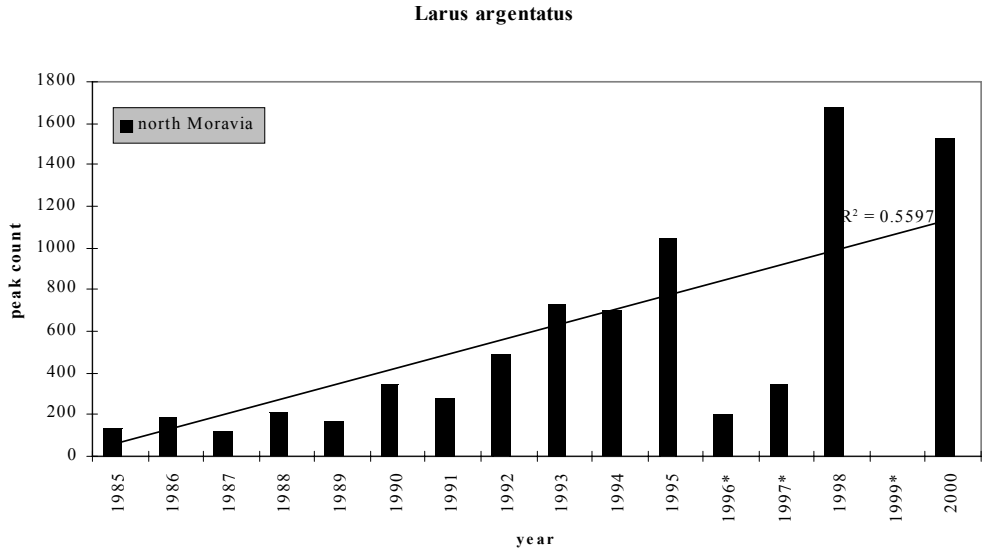

Fig. 2. Population size of *Larus argentatus* between 1985-2000.

(5), the Ostrava refuse tip (6), the complex of industrial lakes within which lie the Karvina and Havíoov refuse tips (7) and the Heomanice fishpond (8). Both study areas were checked regularly by myself and by several birders who have cooperated with me since 1985. The degree of co-operation was further improved in 1992 by the establishment of the Group for the Research of Larids (GRL). I collected the count results and published them regularly in the Bulletin of the GRL.

2. Results

Herring Gull *Larus argentatus*

There is very large difference in the results obtained from the two study areas. In central Moravia, no significant change in numbers of Herring Gull was recorded. This species remains very uncommon in this area, only single birds or small flocks occurring there. In northern Moravia, Herring Gull has occurred in some numbers since the 1970s, the maximum being *c*100 birds. During the study period, a significant increase was recorded (Fig. 2). In the early years of the study, up to 210 birds visited a roost at Karviná, just a few hundred metres from the local refuse tip. Subsequently, numbers increased to about 700 birds by the mid-1990s. In 1995, the roost site underwent changes and also the local refuse tip was closed. The roost shifted promptly 1 km to the nearby Doubrava industrial pond, where sometimes gulls had roosted in the past. The members of this roost continued to frequent two other refuse tips in the study area (Ostrava and Havíoov) and probably some other sites in nearby Poland (the border is only *c*10 km from the roost). In 1996 and 1997 the roost moved temporarily to an unknown location, making the counts much less precise in those years. Additionally, the roost site could not be

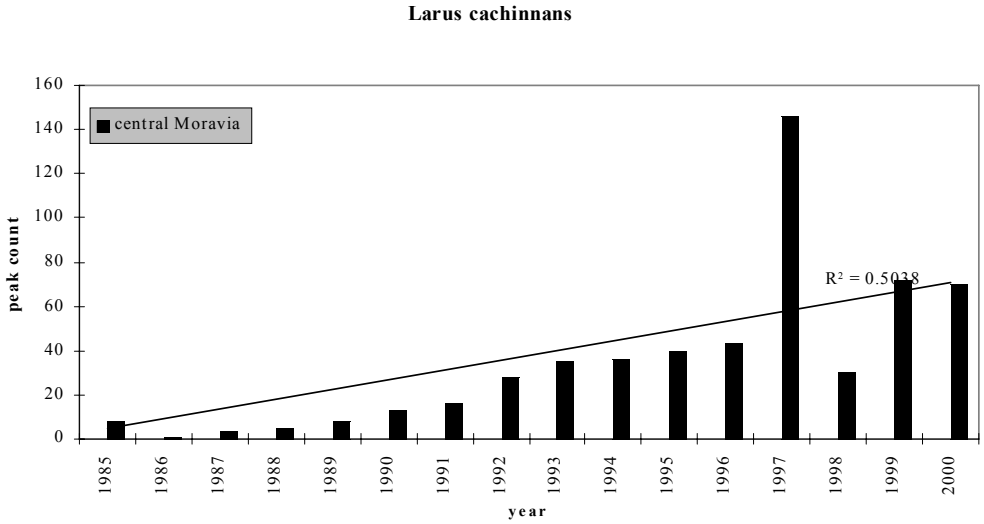

Fig. 3. Population size of *Larus cachinnans* between 1985-2000.

checked in 1999, and so information gull numbers is lacking for that year. However, the Herring Gull has been using the Doubrava roost regularly since 1998 (on 16 Sep 1998 an unprecedented 1670 birds were recorded there). In 2000, 1270 birds were counted on 10 Aug and 1530 on 19 Oct. During the later years of the study, adult birds have outnumbered immatures and juveniles (first- and second-year birds comprise only 20%), a complete contrast to the circumstances at Yellow-legged Gull roosts.

The Herring Gull is now a well-established species in northern Moravia, which it seems to use as a post-breeding moult locale. Larger flocks arrive from late May to June. Numbers build during the summer to peak from late August to September and October. During November, when the flight feather moult has just finished, most birds leave the area and only a small number attempt to overwinter. Such a large assemblage of Herring Gulls occurs only in this area of the Czech Republic; the species is uncommon or even rare elsewhere.

Yellow-legged Gull *Larus cachinnans*

As for Herring Gull, the results of the Yellow-legged Gull show a large difference between the two study areas, but in the opposite sense. In central Moravia (Fig. 3) the Yellow-legged Gull occurred for the first time in the mid-1980s and quickly established the phenomenon of regular late-autumn 'invasions', which takes place from the first days of November onwards. Birds arrive and stay until it freezes, but in mild winters they attempt to overwinter. Until the mid-1990s, numbers present varied between 20 and 40 birds, but on 9 Nov 1997, an unprecedented flock of 146 birds was recorded. 1998 saw only a small invasion, but over 60 birds were recorded in 1999 and in 2000. More recently, in Feb 2001, up to 124 birds frequented the Tovaeov fishponds. Never before had so many Yellow-legged Gulls been recorded during winter, although some small parties had been observed in Common Gull *L. canus* roosts.

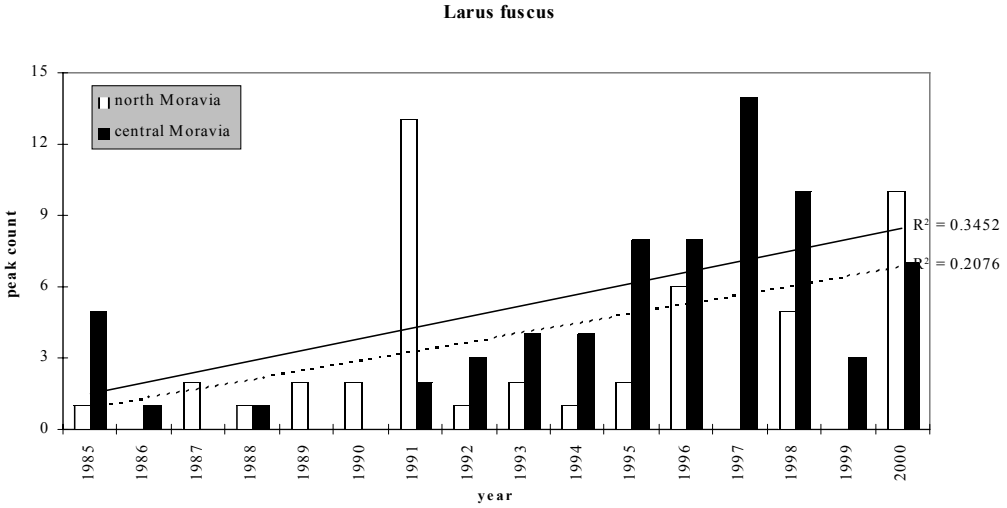

Fig. 4. Population size of *Larus fuscus* between 1985-2000.

During the later years of the study, the Yellow-legged Gull has established itself in central Moravia as a regular autumn and spring migrant, some of which overwinter. It is the earliest gull migrant, the first birds arriving sometimes as early as February, but mainly in March. - This timing seems connected to the species wintering in central and western Europe. Between April and October it is still uncommon, but during late October or early November, many birds arrive, remaining until December (a few stay until January or overwinter). Although there are several refuse tips in that area of central Moravia, the Yellow-legged Gull prefers fishponds and commonly scavenges dead or catches injured fish, often associating with Great Cormorant *Phalacrocorax carbo*.

The situation of the Yellow-legged Gull in northern Moravia is much more complicated. During the study, Yellow-legged Gull occurrence was obscured partly by the increased occurrence of Herring Gulls, but it seemed obvious that only a small number of Yellow-legged Gulls used this area, the largest flocks comprising 10 to 30 birds. However, in November 2000, after the Herring Gull flock apparently had moved to a roost at a small lake near Karvina, it transpired that these gulls were actually new to the area and most of them were Yellow-legged! Most Herring Gulls, of course, have left the area at that time of year. On 24 Nov 2000, 984 Yellow-legged Gulls were counted at the new roost. About 50% of them were first- or second-year birds, distinctly different proportions from those noted for Herring Gull. The occurrence of so many Yellow-legged Gulls in northern Moravia is an abrupt departure from the former pattern, and so much further study is needed to establish whether or not this change is part of a trend.

Preliminary taxonomic examination of the Yellow-legged Gulls in the two study areas reveal that almost all the recorded birds are *L. c. cachinnans*, the Black Sea-Caspian subspecies. Only very few (mainly those recorded in summer) are *L. c.*

michahellis, the 'Mediterranean' subspecies. The composition of the two subspecies in the study areas is not typical of elsewhere in the Czech Republic (even southern Moravia), where *michahellis* predominates.

Lesser Black-backed Gull *Larus fuscus*

Lesser Black-backed Gull, although still not numerous, is now a regular spring and autumn migrant. During the study, a gradual, but obvious increase in numbers of migrating birds has been recorded. Until the late 1980s, this species was very rare and uncommon, only single birds being recorded. However, since the early 1990s small flocks have been recorded more often, becoming regular by the late 1990s. Both study areas have shown the same pattern (Fig 4). Maximum numbers usually are of between 7 and 10 birds. On 14 Apr 1997, 14 birds (including 3 first-winters) were recorded at the Šumvald fishpond.

There is (in contrast to the two above species) a difference between the spring and autumn migration. In spring, very fast movement is typical, birds seldom staying at one site for more than a day; a 5-minute stay is not untypical! In March, but mainly in April, the Lesser Black-backed Gull migrates in single species flocks and does not mix with other large gulls. In autumn, however, mainly from September and November, birds often stay for a long time (up to a month), associating with Herring Gull in northern Moravian roost or with Yellow-legged Gull in central Moravian roosts. The Lesser Black-backed Gull prefers natural habitats and does not visit refuse tips as often as Herring Gull.

3. Conclusion

From the collected data (Figs 2-4) it is obvious that the trend of increasing numbers continues for all three studied species, without any significant changes or apparent 'saturation' of numbers occurring. If we take into account recent and unprecedented events such as the new Yellow-legged Gull roost (almost 1000 birds) near Karviná, the overwintering of over 100 Yellow-legged Gulls in central Moravia, the autumn roost of 1500 to 1700 Herring Gulls at Doubrava (small flocks of *c*10 Lesser Black-backed Gulls amongst them), it is clear that the status of these three species in the Czech Republic (or even in inland Europe) will continue to change, and further increases in numbers can be expected.

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