

## Prey dropping behaviour in Black-headed gull *Chroicocephalus ridibundus*

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**Abstract.** Prey dropping behaviour was observed in spring 2014 in black-headed gull, *Chroicocephalus ridibundus*. I observed one incident when a gull dropped a mussel. This was the first observation of such behaviour in the species at least in the Central Europe. Since hooded crows, *Corvus cornix*, did the same on the same location at the same time I could assume that the gull copied the dropping behaviour from them.

**Key words:** Black-headed gull, Hooded crow, prey dropping behaviour, mussel.

To collect food, birds use different behavioural patterns. One such strategy is prey dropping behaviour. This behaviour is used by the birds that consume hard shelled food. They can drop live animals, such and turtles as well as nuts and even bones (Cristol & Switzer 1999 and references therein).

Among birds, hooded crows, *Corvus cornix*, are probably the best known for their prey dropping behaviour (e.g. Davenport et al. 2014). Gulls are the other big group with such behaviour; ten species of gulls are known for such behaviour (Cristol & Switzer 1999 and references therein, Fraticelli 2014). However, Cristol & Switzer (1999) did not mention the black-headed gull, *Chroicocephalus ridibundus*, in their work.

I observed two-year-old black-headed gull on Rače fishponds [coordinate data, Lat.: 46.442, Long.: 15.680] on 18<sup>th</sup> March 2014 at 8.30 in the morning, tackling a mussel in the empty pond. The day was sunny with no wind. All observations mentioned below were made from a car, about 50 metres from the birds with 8 x 42 binoculars. Black headed gulls are regular and common visitors there, especially during spring migration (pers. obs.).

Rače fishponds are part of the Rački ribniki – Požeg Landscape park in north-eastern Slovenia, Central Europe. They consist of three large ponds (covering from 4.5 ha to 20 ha) which are managed for semi-intensive fish farming. The fish ponds are regularly drained, usually in late autumn or for a few weeks in early spring, and the fish are harvested with the use of a seine net over a few days. The ponds are re-flooded with water from a neighbouring pond or channel. The belt of vegetation, mainly in the largest pond, up to 30m wide, is composed mainly of *Typha* spp. The surrounding landscape consists mainly of mixed forests and meadows with hedges (see Vogrin 1999 for detail description).

At the time when I was observing the gull tackling the mussel, there were 24 other black-headed gulls of various ages present in the pond, 9 hooded crows and two grey herons, *Ardea cinerea*. All birds were actively searching for food. Crows mainly feed on mussels that are left at the bottom of empty ponds after fish harvesting. The only species of mussel present in the pond was swan mussel, *Anodonta cygnea*, of different sizes. The crows tried to open the large mussels (according to estimation about 10 cm long) with beaks while in the pond, some of them successfully. For smaller mussels they use a different strategy. During 15 minutes of observation I registered three different hooded crows take a mussel in their beak and fly from the pond to the asphalt road passing by the pond. From the height of about 10 metres a crow dropped the mussel onto the hard surface of the road and immediately ate the inside part.

During the observation of crows, a two-year-old black-headed gull attracted my attention. The gull pecked at a small swan mussel (appx. 5 cm long) was resting in the mud. The size of the mussel was estimated in relation to the size of the black-headed gull's beak and head. After one or two minutes the gull took the mussel and flew from the pond to the same road as the crows before, which is about 60 meters away. The gull dropped the mussel onto the road from approximately the same height as the crows, but a crow stole his prey and flew away with it in what was an example of typical kleptoparasitic behaviour (García et al 2008).

The question which arises with this observation is: was the gull already familiar with this strategy, or did he learn this watching the crows? On the other hand, there are no known examples of black-headed gulls demonstrating the strategy of prey dropping and only one two-year-old bird out of 24 birds in the pond was observed performing such trophic strategy.

I could exclude also play hypothesis since the gull made no attempt to catch the prey again before it hit the ground (Gamble & Cristol 2002). In my opinion the gull simply copied the crows behaviour, since it seemed quite clumsy when dropping the mussel onto the road, and not attempting to immediately descend on the prey as gulls usually do when food is available (pers. obs.). Here, I must consider that young birds are less experienced in food collecting and this is also true for cracking mussels, as it was described for the herring gull *Larus argentatus* (e.g. Ingolfsson & Estrella 1978) and I could assume this is also the case with the black-headed gull.

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