

NOVEL FORAGING BEHAVIOURS OF BLACK-BILLED MAGPIES

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Corvids, including crows, jays, and magpies, exhibit a variety of foraging behaviours including fecal sac ingestion,⁸ using objects to displace gulls from nests,⁹ and drowning prey.¹ Black-billed magpies have been observed removing ectoparasites from deer³ and wild boar,⁷ preying on small mammals,^{2,10,4} and feeding in fruit trees and at suet feeders.¹⁰ Here we report some previously undocumented foraging behaviours by magpies that were observed at the campus of the University of Saskatchewan, in Saskatoon, between 1999 and 2003.

Insects on Tree Bands

On campus, as well as in the older neighbourhoods in Saskatoon, sticky bands placed on American Elms (*Ulmus americana*) are used to assist in the prevention of canker worm infestations. These bands consist of fiberglass insulation wrapped around the trunk of the tree, bound tightly with tape or plastic and covered with a layer of Tanglefoot™, a 25% natural gum resin-based substance ideal for capturing the canker worm moths. Tanglefoot™ ensnares indiscriminately and tree bands become covered with an array of insects and arachnids. Several times during the winter of 1999-2000 in the University of Saskatchewan “Bowl,” (an open landscaped area surrounded by buildings), Usne J. Butt observed magpies, perched above or below tree bands on elm trees, taking insects directly from the bands with their beaks. Obtaining food in this manner is not without potentially negative consequences; small songbirds have been admitted to the University of Saskatchewan Small Animal Clinic after

adhering to the Tanglefoot™ (C. Wheler, pers. comm.) and it is possible that inadvertent consumption of resin has toxicological effects.

Insects on Cars

In November 2000, Usne J. Butt observed two magpies eating insects off the front bumpers and undercarriage of vehicles parked on campus.

Predation on Waxwings

In February 2003, Julio Blas observed a magpie predation attempt on a Bohemian Waxwing. While the observer was taking pictures of a flock of waxwings feeding on berries in the “Bowl,” a magpie suddenly flew into the shrub and forced one of the birds to the ground. The magpie then stood on top of the waxwing and aggressively pecked its body. The magpie retreated at the observer’s approach and did not kill the waxwing. On several occasions during that fall and winter, magpies were seen carrying remains of waxwings and caching them at the base of tree trunks. Although they were presumed to have collected waxwings killed by colliding with windows, the latter observation suggests that active predation of healthy birds also occurs.

Piscivory

There have been other observations of magpies scavenging carrion and actively preying on small mammals and birds.¹⁰ To our knowledge, however, there are no published observations on magpies eating live fish. In October, 2002, Michael Pollock was running experiments in 18,000 litre outdoor pools behind the W.P. Thompson

Building. The pools, which had styrofoam blocks (60 cm x 60 cm x 3 cm) floating on the surface, contained Fathead minnows (*Pimephales promelas*) and Northern Pike (*Esox lucius*). Over 14 days, one pike and 350 Fathead Minnows disappeared from the pools. Despite the fact that the fish were apparently being consumed, the growth rates of the predatory pike and numbers of missing minnows failed to correlate, suggesting that the disappearance of the fish could not be solely attributable to predation by pike. Fortunately, Julio Blas had previously observed a magpie standing on the styrofoam blocks and catching fish over several days. The magpie captured minnows as they approached the surface and then cached them in the leaf litter and in trees around the pool.

Over the last 35 years, the Black-billed Magpie has expanded its range across western Canada^{5,10} and is now a common resident in Saskatoon. In fact, over 50 active nests were identified on the University of Saskatchewan campus during the summer of 2000 (G. Bortolotti unpub. data). Part of the magpie's success may be attributable to its ability to fledge chicks successfully in urban habitats.⁶ Furthermore, learning to exploit novel food sources such as those described here may increase the likelihood of survival during Saskatchewan winters.

Acknowledgements

Special thanks to G. R. Bortolotti and D. O. Joly for remarks on an earlier draft of this manuscript.

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“The sandflies were most troublesome all day, and towards evening the mosquitoes came out in force. The latter I divide into three classes: the common brown, the large soft drab, and the fierce little black—Quirk, Gammon, and Snap! I named them thus after the well-known firm of lawyers in *Ten Thousand a Year*. The Quirks were pertinaciously bloodsucking, in a humdrum, respectable manner; the Gammons alighted like thistle-down, and drank your blood with tender slyness; the Snaps rushed in with sudden fury, and nipped more than they sucked, though careful not to go empty away.”

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