GENERALIST FORAGING HABITS OF NORTHERN MOCKINGBIRDS

By Marta J. Hersek and Kim C. Derrickson

Northern Mockingbirds (*Mimus polyglottos*), with their complex song, conspicuous displays, and extreme aggression toward nest predators, are familiar birds in New England, particularly in suburban areas. Although mockingbirds were reported breeding in Massachusetts as early as 1852 (Wright 1921), they have not always been common residents. The northern limit of their range has been expanding during the last century, especially during the last 50 years, apparently as a result of increases in preferred habitat and winter food availability (Hamilton 1997, Derrickson and Breitwisch 1992, Stiles 1982). Mockingbirds make use of planted lawns, ornamental shrubbery, and trees for foraging and nesting areas. The introduction of many plants, including multiflora rose (*Rosa multiflora*), that provide berries during the late fall and winter has been especially important, since Northern Mockingbirds are mainly frugivorous during the winter (Derrickson and Breitwisch 1992; Stiles 1982).

One of the reasons that Northern Mockingbirds have been able to take advantage of new, non-native food plants is that they are true generalists, eating a variety of fruits and arthropods. They are also opportunists, occasionally including other plant parts, other invertebrates, and sometimes even small vertebrates in their diet as available (Derrickson and Breitwisch 1992, Wunderele Jr. 1981, Grant and Grant 1979, Sprunt Jr. 1964; Michener and Michener 1935, Beal et al. 1916). In fact, some Galápagos Mockingbirds (in the closely related genus *Nesomimus*) also eat bird eggs, and others drink blood from wounded vertebrates (Curry and Anderson 1987, Harris 1968; Hatch 1965). Below we report observations of Northern Mockingbirds foraging on two other unusual foods: nectar and early spring tree sap.

Drinking nectar

Northern Mockingbirds in Sarasota, Florida, were observed (MH) foraging on the nectar of bottle-brush flowers (*Callistemon* sp.) from March 2-11, 1993. Two neighboring pairs of birds foraged at a bottle-brush tree located between their territorial boundary. Each bird pushed its bill deep into the brush-like inflorescence, then lifted the bill in the manner typical of drinking (Derrickson and Breitwisch 1992). One female, while being closely watched through binoculars, stumbled while foraging in the bottle-brush and jarred the flower, and a large, viscous drop of nectar fell from it. All four birds had yellow pollen stains on their heads and necks, as has been described for Australian birds foraging at *Callistemon* flowers (Ford et al. 1979). The only other published

report of nectar drinking by Northern Mockingbirds was by Michener and Michener (1935), who observed them foraging on nectar from *Grevillea* trees in California. Both *Callistemon* and *Grevillea* are native to Australia, and both are adapted to avian pollination (Ford et al. 1979). Bottle-brush and *Grevillea* flowers share a number of characteristics with other Australian plants that are bird-pollinated, including an open shape with long stamens, lack of odor, and relatively high nectar production (Ford et al. 1979). These characteristics may explain why mockingbirds are attracted to the flowers, and why the only reports of nectar drinking are from these trees. It is unknown whether mockingbirds or other avian species are important pollinators of *Callistemon* or *Grevillea* in North America.

Drinking sap

We observed another unusual behavior of Northern Mockingbirds that demonstrates the opportunistic nature of their foraging: drinking of early spring tree sap. A pair at Tyler Arboretum in southeastern Pennsylvania was observed (KCD) foraging on early spring sap emanating from pruning and natural wounds on dogwoods (*Cornus* sp.) from April 8-10, 1981. On the morning of April 8, the male of a mockingbird pair drank from three different wounds (two pruning sites and a recently cut stump) on four occasions, and the female drank from two different sites (two pruning sites, one of which was also used by the male) on three occasions during sixty-nine minutes of observation. On the morning of April 10, during forty-six minutes of observation, the male drank once (six sips) at the stump. The female had a single bout (lasting nine minutes) of drinking from a natural wound. No sap drinking was recorded in three other pairs during 164 minutes of observation on these two mornings (the nearby territories all had numerous dogwoods, but whether these had been pruned by arboretum staff is unknown). The weather at this time was conducive to sap flow, with cool mornings (-1° C to approximately 7° C at sunrise) and warm (16-25° C) afternoons, and sap flow was extensive: sap was pooling rapidly around the wounds and running down the bark. There were no insects seen around these wounds.

While the composition and solute concentration of sap varies dramatically among different locations on a tree, and depends upon the time of year (Pate 1976), the xylem, particularly during the spring, may contain considerable amounts of sugars and other organic compounds (Bidwell 1971). The use of sap has been reported in species from several genera of North American birds, most notably sapsuckers (*Sphyrapius*), woodpeckers (*Picoides*), kinglets (*Regulus*), and a few warblers (Daily et al. 1993, Erlich et al. 1988). To our knowledge, this is the first time that drinking of sap has been documented in *Mimus*.

Our observations suggest additional food sources that could become important to Mockingbirds in the Northeast. Although it is unlikely that *Grevillea* and *Callistemon* nectar will ever be available in New England, since these tropic-adapted trees would not tolerate our winters, many other ornamentals produce flowers that might be suitable as avian nectar sources. And spring tree sap is certainly widely available. These food sources could provide not only sugars, but also moisture at a time when birds have only limited water sources available to them.

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