Shorter Contributions

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VOCAL MIMICRY OF BROAD-WINGED HAWK
BY BLUE JAY—The Blue Jay (Cyanocitta cristata) is
a well-known vocal mimic of the Red-shouldered Hawk
(Buteo lineatus), Red-tailed Hawk (Buteo jamaicensis),
and several other predatory birds in eastern North
America (Atkins, 1987; Hailman, 1990; Phillips, 1993;
Tarvin & Woolfenden, 1999). At least five hypotheses
have been proposed to explain jay mimicry of raptor
vocalizations but unequivocal evidence for a specific
function is still lacking (Hailman, 1990; Tarvin &
Woolfenden, 1999). Future investigation of this
widespread phenomenon will benefit from careful
documentation of the geographic and temporal patterns
of jay mimicry and raptor distribution.

Here I report the first well-documented account of
the Blue Jay mimicking the Broad-winged Hawk
(Buteo platycercus). On 13 June 2002, I heard what I
thought was the whistle call of a Broad-winged Hawk
in the forest canopy at my campsite on Big Santeetlah
Creek, Graham County, North Carolina (35° 20.7' N,
83° 57.9' W; 840 m above sea level = asl). After a few
minutes, I located the source of the call, a pair of Blue
Jays that had been frequenting the campsite during the
preceding week. This fact was confirmed a few minutes
later when the jays flew across a small clearing and one
of them gave the “hawk” whistle call several more
times. John Gerwin, Rebecca Browning, and I heard
jays mimic a Broad-winged Hawk at the same site on
the morning of 15 June, and I tape-recorded a short
sequence of similar jay calls there at 0800 h on 17 June
(Fig. 1). The behavioral context of the vocal mimicry
was unknown in all three cases.

Broad-winged Hawks occur at relatively low
densities as a summer resident in the Big Santeetlah
Creek watershed (620-1679 m asl), but none was
known to be in the immediate vicinity when the jays
called. With the exception of single sightings of a Red-
tailed Hawk and an unidentified Accipiter, this was the
only hawk I observed in the Santeetlah Creek watershed
(Graves et al., 2002) during 91 days of fieldwork over
ten consecutive breeding seasons (9-24 June 1995-
2004). This observation suggests that breeding Blue
Jays may only mimic raptors that are locally present
regardless of previous experience with other raptor
species encountered during the non-breeding season.

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Fig. 1. Audio spectrographs (a-c) of three consecutive
whistle-calls of a Blue Jay mimicking a Broad-winged
Hawk (Graham County, North Carolina; 17 June 2002),
and (d) a whistle-call of a Broad-winged Hawk
(Cumberland County, Tennessee; 8 July 2002).