

## NOTES

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## Blue Jay Mimics Osprey

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The Blue Jay (*Cyanocitta cristata*) commonly utters a call that sounds remarkably similar to the *kee-arr* vocalization of the Red-shouldered Hawk (*Buteo lineatus*). This well-known fact is commonly mentioned in handbooks and field identification guides (e.g., Chapman 1939: 389, Bent 1946: 47, Peterson 1980: 208). Furthermore, both Chapman and Peterson state that the jay gives a similarly slurred call resembling that of the Red-tailed Hawk (*B. jamaicensis*), and Chapman mentions imitation of the American Kestrel (*Falco sparverius*). Here I report a Blue Jay giving calls that were strikingly similar to the piping notes of the Osprey (*Pandion haliaetus*), which are very different from the slurred calls of the *Buteo* hawks and repeated "killy" calls of the kestrel.

All my observations are from the north side of Jupiter Inlet in Jupiter Inlet Colony, Palm Beach County, Florida, where the Loxahatchee River flows into the Atlantic Ocean. Each summer one or two Ospreys may frequently be seen here flying over the water or perching in *Casurina* trees along the River, from which perches they sometimes call. In late June or early July 1988 I first heard what I took to be the common call of the Osprey: a lengthy train of loud, short cries or whistles. After searching in vain for the bird, I realized that I was entirely fooled, and the calls were actually coming from a Blue Jay perched high in a tree overlooking the Inlet. My notes of 26 July read "1730-1800 . . . Blue Jay in *Casurina* calling just like Osprey, now about the 10th time I've heard this in the Colony this summer." Despite many jays around my house just two blocks away from the Inlet, I never heard this "Osprey-call" anywhere but in the immediate vicinity of the Inlet. From 22 December 1988 to 2 January 1989 I made repeated visits to the Inlet with a tape recorder, experiencing the frustration of not hearing the call—except on 30 December, when my fieldbook notes "0710-0745 . . . heard blue jay giving osprey call (once) but did not have recorder w/ me." Subsequent periods at Jupiter (in March-April 1989, December 1989-January 1990, and May 1990) failed to provide any further repetitions of the call.

F. E. Lohrer has called my attention to a recent note by Atkins (1989), who heard a Blue Jay giving the whistled call of the Osprey on Cedar Key (Levy County), Florida. Atkins was watching a nesting pair of Ospreys calling when hearing a "third" bird nearby, which turned out to be a Blue Jay giving so perfect an imitation that the observer was "completely fooled."

The "raptor" calls of the Blue Jay present at least two interesting questions. One is whether or not jays learn these calls from the other species. Peterson (1980: 208) said simply that the Blue Jay "mimics the calls of Red-shouldered and Red-tailed Hawks"; Chapman (1939: 389) used the term "imitates." However, Bent (1946: 47) was more cautious about the jay's "reputation as an imitator" of raptor calls, stating that "it is difficult, perhaps impossible, to be sure that such cases are not coincidence, especially when we recall the multiplicity of the jay's vocabulary." I concur with Bent's caution, but my observations do suggest that one Blue Jay, which lived in a specific site where Ospreys often perched and called, learned the call from the other species. Furthermore, reports of Blue Jay calls resembling those of several different kinds of raptors renders mere coincidence unlikely.

A more difficult question to answer is why the Blue Jay has evolved raptor calls (regardless of whether the evolution has been directly by acoustical convergence or indirectly through the ability to mimic the calls). At least four hypotheses may be proposed. (1) One possibility is that the jay uses such calls iconically; that is, gives the call to indicate that the particular raptor species is in the vicinity. I never heard either the Red-shouldered Hawk or Osprey calls given when the raptor species was present, although Atkins (1989) did. (2) A related and more likely possibility is that a jay is indicating to companions the site where such a raptor was in the past. All my observations were within 10 m of where Ospreys had been seen. This hypothesis also gains credence from the fact that Ospreys are known to take a variety of non-fish prey, including corvids and some passerines the size of Blue Jays (Wiley and Lohrer 1973). Furthermore, Northern Mockingbirds (*Mimus polyglottos*) were seen mobbing an Osprey (Wiley and Lohrer 1973). (3) Yet another possibility is that the jay is calling to deceive some third species into believing a raptor is present, although the possible benefit to the jay from such deception is unclear. Finally, (4) it might be simply that jays incorporate environmental sounds into their repertoires, and preferentially choose the loud and fairly simple calls of raptors because they are easy to produce. Hypothesis (2) seems the most viable, and the entire subject of mimicry in corvid vocalizations would profit from systematic study.

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#### Florida Scrub Jay Mortality on Roadsides

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Brevard County, Florida supports two of the three largest remaining Florida Scrub Jay (*Aphelocoma coerulescens coerulescens*) populations, with about 1,870 birds on Kennedy Space Center and 920 birds on Cape Canaveral Air Force Station (Breininger 1989). Between 24 May and 5 June 1989, four Scrub Jay carcasses were collected on two roadsides in Brevard County, apparently killed by vehicles. Two were found at the same location on 24 and 30 May at a bend in the road where the nearest scrub was about 11 m from the edge of the road. The individual found on 1 June was located on a straight section of the road where the nearest scrub was about 22 m from the edge of the road. The fourth, a brown-headed juvenile, was found on 5 June, on an intersecting road, where the nearest