

Gammon, D.E., *M.C. Hendrick and M.C. Baker. 2008. Vocal communication in a songbird with a novel song repertoire. *Behaviour* 145:1003-1026.

Why do individuals in many songbird species sing multiple song types? Previous studies have often described the current utility of possessing a vocal signal repertoire, but this may not explain why repertoires evolve. We looked for repertoire function in black-capped chickadee (*Poecile atricapillus*) populations with a song type repertoire that is probably derived from the single song type found in most populations across the species' geographic range. Through observations of dawn singing, and natural and simulated territorial countersinging interactions, we tested several hypotheses on how a repertoire might facilitate improved vocal communication. We failed to find significant evidence supporting an adaptive origin for song type repertoires. Although we found that naturally countersinging males matched song type approximately twice as often as expected by chance, matching was not associated with conflict escalation in either natural or simulated contests and, therefore, the exact function of song type matching in these birds remains unclear. In addition, we found that novel song types frequently appear in small isolated populations, which suggests that a repertoire might evolve simply as the nonadaptive result of imperfect song-learning combined with geographic isolation.