



BIRDS

Invasive birds are well-established in cities and suburban areas across the U.S. Species include House and Eurasian Tree Sparrows, the European Starling, three mynah species, almost 30 species of parrots and parakeets, the Rock Pigeon, and the Eurasian Collared Dove. Birds such as the Eastern Bluebird, Northern Flicker, and Red-headed Woodpecker have suffered from nest site competition with sparrows and starlings. Introduced birds such as the White-rumped Shama and Japanese White-Eye are likely impacting Hawaiian forest birds through food and nest site competition, and by acting as disease reservoirs, but no hard data yet exist to show population-level effects. In addition to the species highlighted here, some larger gull species have become overabundant due to the availability of food at land-fills and fish docks, and are generating unnatural levels of predation pressure on species such as the Roseate Tern in the Northeast, and on seabirds such as the Ashy Storm-Petrel on California islands. Populations of species such as the Blue Jay and American Crow may also be somewhat inflated due to human activities, allowing increased nest predation of other native birds in populated areas.



PHOTO: ROBERT ROYSE

European Starlings and House Sparrows compete for nest cavities with native species such as the Eastern Bluebird.



PHOTO: TOM GREY

Forest clearance and cattle farming enabled the Brown-headed Cowbird to expand its range and parasitize new host species.

COWBIRDS

Several species of cowbird are native to the U.S., the Caribbean, and Mexico. The Brown-headed Cowbird (*Molothrus ater*) was originally native to the Great Plains where it foraged alongside migratory bison herds. Today, it is mainly found alongside livestock, in feedlots, and in other agricultural areas. It has greatly expanded its range across the “Lower 48” states and north into much of Canada, thanks to forest fragmentation and the expansion of livestock into new areas. The Breeding Bird Survey shows that Brown-headed Cowbird populations in North America number between 20 and 40 million birds, but indicates that despite some local increases, overall numbers declined by 1.5% annually (45% total) from 1966-2006, perhaps due to a reduction in open habitats in the East. The Bronzed Cowbird (*M. aeneus*) is native to arid regions of the U.S. along the southern border from southeast California to the Texas Coast, and the Shiny Cowbird (*M. bonariensis*) is native to the Caribbean and Central and South America, but now also occurs in southern Florida. Both Bronzed and Shiny Cowbirds benefit from human activities (irrigation, pastures) and are expanding their ranges in the U.S.



Problems: Cowbirds are nest parasites (also known as brood parasites). Female cowbirds lay single eggs (up to 40 in a season) in nests belonging to other bird species, which then rear the cowbird chicks at the expense of their own. Cowbird chicks hatch earlier than their hosts' eggs, are larger than host chicks, and out-compete host nestlings for food and attention from the unsuspecting foster parents. Cowbird nest parasitism often results in the death of the host eggs or nestlings, and can greatly reduce the reproductive success of some host species. Brown-headed Cowbirds have been recorded parasitizing the nests of more than 220 species, and have been successfully reared by over 150, including WatchList species such as the Wood Thrush. Forest species that build open cup nests (e.g., vireos and warblers) and have only been exposed to cowbird parasitism during the last few hundred years are particularly vulnerable. Nests close to cowbird foraging areas are more vulnerable to parasitism. Deforestation by humans frequently results in small remnant forest patches with a high perimeter to interior area ratio. Brown-headed Cowbirds thrive along these edge habitats, causing dramatically increased rates of parasitism. Shiny Cowbirds also parasitize a wide variety of host species (including Endangered species in the

Caribbean such as the Yellow-shouldered Blackbird), but Bronzed Cowbirds are more specialized, favoring nests of orioles, thrashers and mockingbirds, Northern Cardinals, and Green Jays.

Solutions: Live-trapping of cowbirds, which are later humanely killed using carbon monoxide or other methods, has been used locally. Trapping cowbirds in critical breeding areas for Endangered species (e.g., Kirtland's Warbler, Golden-cheeked Warbler, Black-capped Vireo, and "Least" Bell's Vireo) successfully reduces parasitism and increases reproductive success of hosts near traps, but is insufficient to impact cowbird numbers in subsequent years. Reducing fragmentation and maintaining habitat cover over large intact landscapes may be the best solution for forest birds vulnerable to cowbird parasitism.

Actions:

- Continue cowbird control programs to maintain populations of endangered species. Consider expanded local cowbird control that might aid other species, such as the Audubon's Oriole along the Rio Grande, and the ESA-listed Florida population of the Grasshopper Sparrow.
- Larger-scale Brown-headed Cowbird control at winter roosts requires further research, caution to avoid harming non-target birds, and cost-benefit analysis in light of overall declining population trends.



PHOTO: ROBERT ROYSE

Brown-headed Cowbirds lay their eggs in the open-cup nests of other birds, such as this Bell's Vireo.

GEESE

Snow Geese (*Chen caerulescens*) and Canada Geese (*Branta canadensis*) are both native to North America. Certain populations (*C. c. atlantica*, *C. c. caerulescens*, and *B. c. maxima*) of both species have experienced rapid growth over the last 40 years and become overabundant in eastern and central North America, thanks in part to abundant food supplies provided by agricultural areas, man-made lakes and ponds, cattle feed lots on their wintering grounds, and protective hunting regulations. There are presently more than ten-million Snow and Canada Geese in North America.