



### **Energy boost.**

Extra seed gives these blue tits a reproductive advantage, but feeders may not be an all-around boon for birds.

Credit: Gillian Robb

## **Birds on the Dole**

By Elsa Youngsteadt  
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People dish out 500,000 metric tons of birdseed each year in the United States and the United Kingdom, enough to support millions of songbirds. This generous expenditure surely reverberates through the ecosystem, and researchers are trying to understand how. In a recent review, ecologists found that, although the birds that eat the extra food usually benefit, the bonus seed may be a mixed blessing.

Few scientific studies have addressed the ecological effects of backyard bird feeders. So Gillian Robb, an ecologist at Queen's University Belfast in the U.K., and her colleagues gathered as much information as they could about supplemental feeding in any context, for species from sparrows to owls.

It may come as a relief that most birds that got extra food survived winter better, bred earlier, and had more offspring, the authors report online 25 February in *Frontiers in Ecology and the Environment*.

Indeed, Robb and her colleagues confirmed this effect with an experiment of their own in Northern Ireland, where they gave peanuts to dozens of blue tits at five woodland sites and let the birds fend for themselves at another five sites. The birds that nibbled peanuts all winter fledged more chicks in the spring, the team reports in a separate paper in the April issue of *Biology Letters*.

But in their *Frontiers* review, the authors also found some pitfalls. For instance, one study from 2001 showed that when Florida scrub jays ate too much in winter, they laid their eggs so early that the hatchlings' natural food sources weren't available when they needed them. The review could only hint, however, at one of the biggest concerns: the potential for indirect impact of feeding on birds that *aren't* getting the food. If a region's year-round residents plump up on extra seed all winter and get a head start on breeding territories and natural food supplies in the spring, they could present stiff competition to migrants returning from tropical wintering grounds. Although this impact is rarely studied, it's the reason that avian ecologist Anna Pidgeon of the University of Wisconsin, Madison, doesn't feed birds.

Paige Warren, an urban ecologist at the University of Massachusetts, Amherst, says that based on the paper, she won't discourage birders who ask her advice on bird feeders. But she brings up another potential downside, the socioeconomic impact: Birdseed is often grown in regions where farmers are treated poorly. And then there are the environmental effects of growing and transporting thousands of tons of birdseed.

Robb says that existing data don't constitute a clear mandate on whether to feed the birds. "It was really varied what we found," she says, emphasizing the need for more experiments. Pidgeon says the review may help stimulate such research. "It's a really timely issue," she says, given the housing growth of recent years.