



Yard Birds

Reflections on backyard birding throughout Illinois

by Robert Fisher

Hot bird!

To many birders that conjures up the image of a just located rarity – like the Reddish Egret seen by many at the Chicago Botanic Garden earlier this spring. Karen and I are very much part of that community of birders. We've chased a lot of hot birds, sometimes having the good fortune to discover one ourselves and then experience the joy and excitement of spreading the word so other birders can try and see it, other times reading or hearing about a rarity, then rushing out to the car to make a short (or long) trek to try and see it (not always successfully).

But today those two words have a different meaning to me. It's 90+°F in our yard, not a breath of wind is stirring, and the southwestern suburbs of Chicago where we live are in the grip of an early summer drought and heat wave. The tiny creek bordering our back yard is down to a trickle, drying up for half its length during the midday heat. It feels more like late July than mid June.

Our Illinois breeding birds are generally well-adapted to handle summer's heat, but heat plus drought adds an extra level of stress as they raise their young. The thermoregulation of their metabolism (to keep their body temperature constant) is actually more difficult when the ambient temperature gets high. In fact birds can die more quickly when subjected to heat stress than when exposed to exceptionally cold weather. Smaller songbirds especially, more rapidly absorb heat from the environment

and lose water faster than larger species. Of course birds don't sweat, but there is a very small moisture loss through their skin. We've all seen their principal method of cooling – panting for evaporative cooling. As the air temperature increases, panting rates necessarily also must increase. One reference I checked reported that the evaporative respiration/panting rate of a House Sparrow increases from 57/minute at 86°F to 160/minute at 109°F.

Bird species inhabiting hot, and dry (desert-like) environments developed a specific metabolic adaptation governing thermoregulation – a lower basal metabolic rate (BMR) than similarly sized birds found in more temperate climates. What does this mean? They burn less energy at whatever they're doing (and therefore generate less heat) than a similarly sized bird living in a temperate woodland, for example. This adaptive strategy allows many species to survive and prosper in an extremely inhospitable desert environment. Ornithologists are still trying to figure out whether there's a direct correlation between lower BMR and aridity. The most recent studies suggest birds occupying either hot and dry or hot and wet (tropical) climates both exhibit lower BMRs than temperate climate birds. So it may not be the humidity, just the constant heat, which led to the adaptation.

Our backyard birds, mostly temperate woodland birds, don't have this built in lower BMR. They need a reliable water source to replace the