

Predicting Species

A **GAME** of High Reason Adds a

At the end of every semester that I teach ornithology, I offer my students an opportunity to clean their slates and achieve an “A” for their final grade. Their past record in the class does not matter; they also do not have to take the final exam or turn in a term project. The catch is that they have to earn a perfect score on a game of predicting bird species.

Here’s how to play the game. Write down a list of all the birds you think you’ll see or hear on a road trip. You get two (2) points for each correct entry on your list. Two points of strategy: First, don’t go overboard, because you lose one (1) point for each species on your list that you don’t see or hear; second, don’t be too stingy, because you also lose one (1) point for each species that you do see or hear, but that isn’t on your list.



Let’s start off with something simple. For a hypothetical late-spring tour of Weld County, Colorado, one of the species on your list is the **Red-winged Blackbird**. And, yes, you did see this beauty on a barbed wire fence along the road. So you get two (2) points.



Suspenseful Twist to the Birding Experience

Here is how the game is played. Make a list of all the birds that you predict will be observed on a given trip. Once the list is recorded and the trip begins, no changes are allowed. After the end of the trip, tally your score. You receive two points for every bird on your list that you actually observed (hearing counts as observed). Subtract one point for every bird on your list that you did not observe, and subtract one point for every bird you observed that was not on your list. For example, if you had 68 species on your list, and you observed 53 that were on your list and 11 that were not on your list (a total of 64 actually observed), give yourself 106 points ($53 \times 2 = 106$) for the birds on your list that you observed; now take away 15 points for the 15 birds on your list that you did not observe ($68 - 53 = 15$) and 11 points for the 11 birds observed that were not on your list. The final score would be 80

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You also entered **McCown's Longspur** on your list, and you saw this adult male right in front of you in one of the countless backcountry roads of Weld County. Give yourself another two (2) points.

Another easy two (2) points: a **Lark Bunting** on a roadside post. This is one of the most characteristic species throughout much of Weld County from May through September.



(106–15–11=80). Whoever has the highest score is the winner.

You can also calculate your percentage correct by dividing your score by the perfect score (all birds observed times two); this allows you to play against yourself among trips. Using the above example, the percentage correct would be 80/128, or 62.5%. You can also add bonus points to the game, such as three points for guessing the number of species you will observe, regardless of how many are on your list. In the above example, if you had guessed that you would observe 64 species, you would get to add three points. Can you earn a negative score? Yes, you can—and I have done it! This occurs most frequently when you go somewhere far from home where you have never been before, and your list is too happy.

How do my students fare? It varies as much as their personalities and sense of determination. Some students scout out the fieldtrip site the day before and base their lists on what they



Oops. Where'd *that* guy come from? You didn't enter **American Bittern** on your list, but this individual walked right across the road, bringing your vehicle to a screeching halt. Delete one (1) point from your tally.



If you go birding in Weld County in late spring, you are bound to see **Cliff Swallows** along the roadsides. You know that, of course, and you have entered the species on your list. You found this flock gathering mud for nest-building, so give yourself two (2) more points.

Bummer. You predicted **Chestnut-collared Longspur**, an uncommon but regular breeder in Weld County—but you didn't detect any. So you subtract one (1) point from your tally.

Your running tally thus far is: 4 correct predictions x 2, minus 1 for the American Bittern you didn't predict, minus 1 for the Chestnut-collared Longspur you missed, for a total of 6 points.



observe on their scouting trips. Not surprisingly, these students usually score the highest. However, no student has fared any better than 85%, and I consider any percentage score above 60% (traditionally a low D) to be good. I am happy to get a “D” myself, and I have never come even close to a perfect score. The game causes much excitement and bantering among my students. Some of them even talk “smack” about getting a perfect score and not taking the final exam. Needless to say, they have a great time trying for that perfect score. Most importantly, it teaches them important lessons about the unpredictable and dynamic aspects of bird populations. It also makes them think about what birds to expect in particular habitats as well as the ranges and seasonality of different species.

This game can also be used to entice children to watch birds. My daughter has been playing this game since she was eight. She is now 17, and for a recent trip from Durango, Colorado, to Bosque del Apache National Wildlife Refuge in New Mexico, her score was only four points behind my score and one point behind her father's score. Whether she would have been as interested in birding without this game cannot be known, but it is fair to say that she looks harder—especially for the birds on her list!

