

Why upland bird numbers boom and bust, and how to take advantage of the good years and the bad.

MAKING HAY

WHILE THE BIRDS FLY

By Jack Ballard



CALL IN SICK In years when pheasants and other upland bird species are abundant, hunters should take advantage of the bounty and spend as much time afield as possible. FWP biologists are cautiously hopeful that 2024 will be a decent year for roosters, sharptails, and gray (Hungarian) partridge.

My dog Percy pauses ahead of me, his jog along a wetland interrupted by bird scent. The English setter veers abruptly into the marsh, the fuzz from a shaken cattail slowly settling on his haunches and upright tail, the remainder of his rigid body obscured in the shoreline vegetation. I hurry toward his location, but a rooster pheasant bursts from the cattails a

bit out of range. As I reach my still-stationary setter, a second rooster erupts from cover less than a yard in front of his nose.

The pheasant folds at my shot then drops. Moments later, my dog delivers the trophy to my feet. The bird joins two others in the back of my vest. Percy looks my way, then turns expectantly ahead toward another strip of cattails.

“Sorry, old man,” I tell the 10-year-old setter. “That’s a limit.”

What a difference a year can make! The previous upland bird season, Percy and I hunted the same location on almost the same day on the calendar. We hunted until mid-afternoon and harvested the only cock we were able to kick from the cattails. But here we are, with a limit of birds in the

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USUALLY A BLESSING A thunderstorm moves across the prairie near Heart Butte on the Blackfeet Indian Reservation. Rain is essential for producing dense grass and forb cover that upland birds need for nesting and brood survival—not to mention that farmers need for hay and other crops. But sometimes late spring and early summer storms, especially when they produce localized hail and cold winds, can kill vulnerable chicks.

bag at just past 10 a.m.

I know you can’t judge the size of pheasant populations in separate years by comparing just two outings. But in this case, those hunts represented what biologists and hunters across Montana later verified with harvest reports: One year produced a bumper crop of roosters, while the previous one was a dud.

The old saying “Make hay while the sun shines” recommends taking advantage of a good situation while conditions are favorable. The origins were from cutting, raking, and stacking hay on sunny, dry days, before rains made the job difficult. But the adage applies just as well to upland bird hunting.

Populations of pheasants, gray (Hungarian) partridge, and sharp-tailed grouse fluctuate widely from season to season, mainly in response to weather. When conditions create large bird numbers, a hunter needs to be ready to take advantage of that year’s bonanza and, as they say, make hay. And during bleak years, hunters need to

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ratchet down their expectations and prepare to hunt much harder.

RAIN, BUT NOT WITH COLD AND HAIL

Upland bird populations “boom” in response to ideal nesting and rearing conditions that allow hens to hatch large numbers of eggs and enable chicks to survive until autumn, says Justin Hughes, an upland bird biologist with Montana Fish, Wildlife & Parks in Miles City. Ideal growing conditions for grass and

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other ground vegetation require good over-winter soil moisture and abundant spring rains with warm temperatures.

Most of that grass cover will come from new growth, but in less-than-ideal years,

cover from the previous season can also be critical. Hughes says that sage-grouse research indicates that the birds use the previous year’s vegetation during cold springs when new grass growth is delayed.

Hearty plant growth not only provides nesting cover, it also provides “brood cover” by nourishing insects that baby upland birds eat during their first few weeks. Newly hatched chicks feed on smaller insects like ants and tiny spiders, then move to beetles and grasshoppers as they grow bigger.

Those bugs also provide vital protein for female birds recovering from the physically taxing work of laying eggs and rearing young. Hen pheasants commonly lose 20 percent or more of their body weight from egg-laying and nesting, sapping their strength and making them more susceptible to malnutrition and predation.

“Brood cover can be almost as important as nesting cover for pheasant production,” Hughes says.

For sharpies, too. On more than one occasion, I’ve harvested juvenile sharp-tailed grouse in eastern Montana in early September that were so stuffed with hoppers they were



MIGHTY MORSEL Young pheasants and other upland birds rely on grasshoppers for a protein boost. Years of good hopper production often produce healthy numbers of upland birds as long as the insects don't eat up all the cover.

regurgitating the insects from their crop.

High grasshopper numbers and game bird reproduction don't always correlate. Hoppers do best in dry conditions, while grass needs plenty of moisture. What's more, grasshoppers eat grass, so in drought years when insect numbers are booming, the insects devour much of the vegetation that manages to sprout. That leaves young birds vulnerable to predators and the elements even though there are plenty of bugs to eat.

The nature and timing of precipitation is just as important as volume. Downpours anytime from May through early July can literally drown newborn chicks. If coupled with cold temperatures, heavy rains can dramatically increase the risk of hypothermia. Hatchlings can die within a few hours in wet, windy 45-degree temperatures if unprotected by their mother's plumage.

"In years with a really wet and rainy late spring and early summer, we can see a decrease in chick production," Hughes says. "For hunters, that actually becomes more obvious the following hunting season." For example, Hughes points out that in the last drought cycle, hunters were pretty happy with the number of birds they encountered the first really dry year (2020). But the drought caused reproduction rates of upland species to drop, meaning fewer birds the following year, when hunters had to work

harder to put birds in the bag.

Ironically, many hunters fail to recognize a banner bird year because they have a tough time finding the birds. Hughes hunts all kinds of upland birds behind his German shorthair pointers but is especially fond of sharp-tailed grouse and pheasants. He notes that the very conditions that produce lots of birds—abundant vegetation—can make hunting difficult. "The birds have so much available cover that they really spread out," he says.

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BEWARE THE DEEP SNOW

While lots of vegetation and grasshoppers contribute to strong upland bird populations, severe winters and drought drag numbers back down. "Long, hard winters with deep, heavy snow and ice are especially hard on non-native upland birds," says Hughes,

because they rely more on agricultural foods. Native sharp-tailed and sage-grouse have adapted more to berries and leaves than grains. "Snow isn't necessarily bad, until it gets too deep and prevents pheasants and gray partridge from foraging," he explains. Making things worse are warm, sunny mid-winter days that melt snow, which re-freezes overnight with an ice crust that prevents birds from reaching food. Winter rains that freeze create the same problems. "Even if the ice cover is thin, it can lock up forage," Hughes says.

Pheasants and gray partridge typically benefit from agriculture in winter. "Waste grain left on fields is usually enough to carry them through the winter unless it gets covered in too much snow," says Ken Plourde, FWP upland bird biologist in Glasgow. "When snow gets crusted or covered in ice, they turn to less plentiful food sources like buffalo berries, Russian olives, or the seeds from tall weeds." But picking at these low-calorie foods means birds are exposed for a longer time, making them more vulnerable to the elements and predation.

For game birds, there's nothing worse after a snowy, cold winter than a hot, dry spring and summer. Without adequate nesting cover from new vegetation, female birds and their nests are more easily discovered by predators. The sparse grasses and withered forbs also mean fewer insects for hatchlings to eat during



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WOES OF WINTER Deep snow is another killer for upland birds—especially non-native pheasants and gray partridge. If too deep or crusted, the snow can prevent birds from reaching grains on the ground. Plus it makes the birds more exposed to predators as they spend additional time finding enough calories to survive the cold. Cattails are essential cover for pheasants, and brushy shelterbelts without raptor-friendly trees benefit gray partridge (below).



FROM LEFT: GARY KRAMER, STEVEN AKRE

FROM TOP: STEVE LEITNER, KERRY NICKOU

their first few weeks of life.

Isolated hail and wildfires also pose threats to local bird populations. “We can get quite a bit of hail in southeastern Montana, hailstones large enough to kill juvenile and even adult birds,” Hughes says. Unlike hail, wildfire seldom kills birds outright. But it “forces birds to relocate somewhere else where the habitat might not be as favorable to nesting or brood production,” Hughes explains.

GAINING AN EDGE

How might a savvy upland bird hunter use all this information? Hughes offers several tips. First, keep tabs on weather conditions throughout the year for the areas where you hunt. If it looks like a bust year, lower your expectations and plan on walking miles between flushes. “The one bit of good news about low numbers is that word spreads fast

and you won’t have as much competition from other hunters” as in boom years, the biologist says. The birds will be few and far between, but at least you’ll have them mostly to yourself.

If favorable weather conditions seem to predict a banner bird year, be prepared to take as much vacation time off as your boss and spouse will allow so you can take full advantage of that bounty.

Keep in mind that good news also spreads fast, so you’ll have more competition.

One strategy for early season sharptails and gray partridge during banner years is to stay away from dense stands of grass and forbs, such as those found on CRP acreage. “The birds get claustrophobic in too much cover,” Hughes says. “I look for areas that have been grazed, or the drier south-facing slopes that tend to have less cover.” The

thick prime cover is also where most other hunters gravitate, so by hunting secondary spots you’re more likely to pick up birds that haven’t been spooked.

Montana’s upland bird populations have suffered in recent years due to long-term drought. But numbers were up a bit in 2023, the winter of 2023-24 was mild, and enough rain fell this past spring in many areas to create good nesting cover. “It’s still too early to tell, but I’m predicting a pretty good year for bird production,” Hughes says.

If so, that means he’ll be out there with his German shorthairs taking advantage of the bird boom. “But to tell you the truth, I’m out there hunting as much as I can no matter what the bird numbers are like.”

Turns out that some Montana upland bird hunters try to make hay whether the sun shines or not. 🐄

CLOCKWISE FROM RIGHT: STEVEN AKRE; STEVE OEHLENSCHLAGER; LESTER A. KISH



ABOUT THOSE BAD YEARS... When upland bird numbers are low, which has been the case in recent years due to severe drought and loss of CRP grasslands, hunters need to adjust their expectations. Points and flushes will be fewer and farther between, and birds in the bag will require more miles afield than in good years. One silver lining: Once word gets out the bird numbers are down, you’ll likely have the fields all to yourself.

FWP AND GROUPS HELP MITIGATE MOTHER NATURE

Wildlife biologists and upland hunters can’t do anything about the weather. But they try to protect as much nesting, brood, and winter habitat as possible to help birds thrive when weather conditions are favorable and survive in years when winter snow is deep and spring rains don’t fall.

Abundant quality winter habitat is critical for helping birds escape the elements and avoid predators. “Cover that’s large enough and dense enough to cut wind and block snow is key to winter survival,” says Ken Plourde, FWP upland game bird biologist in Glasgow.

On the prairie, stands of native chokecherry and buffalo berry found in coulees are vital for pheasant and sharptail survival. Pheasants also huddle in frozen cattail marshes, which act like giant down sleeping bags to trap heat and block wind. Protecting such areas from trampling by livestock is one way to ease the stress on upland birds during winter.

Planted shelterbelts are another excellent source of winter cover. “Good shelterbelts consist of multiple rows of shrubs that catch snow and break the wind,” Plourde says. “For upland birds, shelterbelts consisting of shrubs without trees are the best. Trees provide nesting and perching places for raptors that prey on game birds.”

As for drought, the key is to protect and restore large tracts of prime nesting and brood cover so that at least some vegetation will be available. Small patches and thin strips won’t cut it. Any nest will be easily found by a roaming fox, coyote, or skunk. “Some research shows that 20 acres is a minimum for decent chick production, with survival rates getting progressively better up to 160 acres,” Plourde says.

Federal programs pay farmers to convert croplands to grasses and protect marshes that provide vital winter protection. At the state level, FWP works with groups like Pheasants Forever to pay landowners to protect and restore prime upland game bird habitat. ■



By protecting grasslands, FWP, groups like Pheasants Forever, and conservation-minded farmers help upland birds thrive in good weather and better survive years of severe drought, deep snow, and especially cold winters.

