

## GROUSE OF THE LEWIS & CLARK EXPEDITION

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"The flesh of the cock of the Plains is dark, and only tolerable in point of flavour. I do not think it as good as either the Pheasant or Grouse." These words were spoken by Meriwether Lewis on March 2, 1806, at Fort Clatsop near present-day Astoria, Oregon. They were noteworthy not only for their detail but for the way they illustrate the process of acquiring new information. A careful reading of the journals of Meriwether Lewis and William Clark (transcribed by Gary E. Moulton, 1986-2001, University of Nebraska Press) reveals that all of the species referred to in the first quote are grouse, two of which had never been described in print before.

In 1803-06 Lewis and Clark led a monumental three-year expedition up the Missouri River and its tributaries to the Rocky Mountains, down the Columbia River and its tributaries to the Pacific Ocean, and back again. Although most of us are aware of adventurous aspects of the journey such as close encounters with indigenous peoples and periods of extreme hunger, the expedition was also characterized by an unprecedented effort to record as many aspects of natural history as possible. No group of animals illustrates this objective more than the grouse.

The journals include numerous detailed summary descriptions of grouse and more than 80 actual observations, many with enough descriptive information to identify the species. What makes Lewis and Clark so unique in this regard is that other explorers of the age rarely recorded adequate details. For example, during 1807-12 in the Montana, Idaho, Washington, and British Columbia area, David Thompson recorded nine observations of grouse, with the simple description of "partridge." In one additional case the observed bird was referred to as a "white partridge," likely a grouse now known as a white-tailed ptarmigan. In contrast, Lewis and Clark provided a 300-plus-word description of the greater sage-grouse, along with numerous details associated with specific observations of sage-grouse along their route. They also provided comparable information for the five other grouse species observed on their journey, including greater prairie-chicken, sharp-tailed grouse, blue grouse, spruce grouse, and ruffed grouse. This comparison is not meant to diminish the accomplishments of early explorers like David Thompson, for his writings are actually quite insightful. Rather, it is meant to illustrate the unprecedented natural history content of the journals of Lewis and Clark.

Fred C. Zwickel (retired professor, University of Alberta) and I examined the transcribed journals for all references to grouse. We were not the first along this path, and likely will not be the last. Most notably, in 1893 Elliott Coues produced *The History of the Lewis and Clark Expedition* (reprinted by Dover Publications), in which he itemized many of the species described, including grouse. Coues stated, "No descriptions in L. and C. have teased naturalists more than those here given of the... 'pheasants.' As they stand in the text, they are an odd jumble, utterly irreconcilable with what we know of these birds. I could make nothing of them in 1876, and gave the matter up, supposing the authors had written from memory and confused several species."

One of the purposes of our recent effort was to resolve some of the identifications that were either questionable or unresolved in light of current knowledge. Some of the direct quotes (with most of original punctuation and spelling) are provided below to give a taste of the richness of the journals.

The greater prairie-chicken was the first grouse species mentioned in the journals. On November 16, 1803, near the confluence of the Ohio and Mississippi Rivers, Lewis wrote: "Saw a heath hen or grows which flew of and having no gun with me did not persue it." From the eight observations of greater prairie-chickens that were written between southern Illinois and southeastern South Dakota, it is clear that Lewis and Clark recognized this bird as the familiar heath hen, still present at that time in the northeastern United States. They were able to distinguish this species from the similar sharp-tailed grouse because the greater prairie-chicken has a tail "composed of feathers of equal length." On September 2, 1806, on the return trip near the confluence of the James and Missouri Rivers, along the Nebraska-South Dakota border, Clark wrote: "I saw 4 prarie fowls Common to the Illinois, those are the highest up which have been Seen."

Sharp-tailed grouse were observed on at least 22 occasions from South Dakota through south-central Washington. On October 1, 1804, above the confluence of the Cheyenne and Missouri rivers in South Dakota, Clark described the sharp-tailed grouse as "Booted, the Toes of their feet So constructed as to walk on the Snow, and the Tail Short with 2 long Stiff feathers in the middle."

On April 15, 1805, in Mountrail County, North Dakota, Lewis added, "I also met with great numbers of Grouse or prarie hens as they are called by the English traders of the N.W. These birds appeared to be mating; the note of the male is kuck, kuck, kuck, coo, coo, coo. The first part of the note both male and female use when flying."

At Fort Clatsop Lewis summarized: "They feed on grass, insects, the leaves of various shrubs in the plains and on seeds of several species of spelts and wild rye which grow in the richer parts of the plains. In winter their food is the buds of the willow & cottonwood also the most of the native berries furnish them with food." He further stated that: "The Grouse or Prarie hen is peculiarly the inhabitant of the Grait Plains of Columbia they do not differ from those of the upper portion of the Missouri." Lewis and Clark even sent a live sharp-tailed grouse in a cage down the Missouri River from Fort Mandan, North Dakota, in spring 1805, though this bird died en route.

Greater sage-grouse were observed on at least nine occasions from western Montana through southeastern Washington. Their large size, "about 2/3rds the size of a turkey," is one reason why they were so noticeable. The observation of the first sage-grouse was described by Lewis on June 5, 1805, near the confluence of the Marias and Missouri Rivers in Montana: "I saw a flock of the mountain cock, or a large species of heath hen with a long pointed tail which the Indians informed us were common to the Rockey Mountains, I sent Shields to kill one of them but he was obliged to fire a long distance at them and missed his aim."

On August 20, 1805, west of Lemhi Pass in Idaho, Lewis wrote: "Capt. C. killed a cock of the plains or mountain cock, it was of a dark brown colour with a long and pointed tail larger than the dunghill fowl and had a fleshey protuberant substance about the base of the upper chap, something like that of the turkey tho' without the snout." At Fort Clatsop, Lewis summarized: "The cock of the Plains is found in the plains of Columbia and are in Great abundance from the

entrance of the S. E. fork of the Columbia [Snake River] to that of Clark's river [Deschutes River]."

Blue grouse were observed on at least eight occasions between western Montana and western Oregon and Washington. On August 1, 1805, near the three forks of the Missouri, Lewis wrote: "As I passed these mountains I saw a flock of the black or dark brown pheasants.... This bird is fully a third larger than the common pheasant of the Atlantic states [ruffed grouse]. It's [sic] form is much the same. It is booted nearly to the toes and the male has not the tufts of long black feathers on the sides of the neck which are so conspicuous in those of the Atlantic." On April 16, at The Dalles on the Columbia, Lewis wrote: "Joseph Fields brought me a black pheasant which he had killed; this I found on examination to be the large black or dark brown pheasant I had met with on the upper part of the Missouri...the tail is composed of 18 black feathers tipped with bluish white, of which the two in the center are rather shorter than the others which are all of the same length." Although this description differed slightly from the earlier summary at Fort Clatsop, in which the tail was described as "uniform dark brown tipped with black," it is notable that the blue grouse in different regions vary in the appearance of their tail feathers (black in some, tipped with gray in others).

Spruce grouse have a narrow distribution along the route taken by Lewis and Clark; six observations were described, all along the Lolo Trail in northern Idaho and western Montana. At Fort Clatsop, Lewis summarized:

*The small speckled pheasant found in the same country with that above described [blue grouse], differs from it only in point of size and somewhat in colour. It is scarcely half the size of the other; associates in much larger flocks and is very gentle. The black is more predominant and the dark brown feathers less frequent in this than the larger species. The mixture of white is also more general on every part of this bird. It is considerably smaller than our pheasant [ruffed grouse] and the body rather more round. In other particulars they differ not at all from the large black and white pheasant. This by way of distinction I have called the speckled pheasant.*

On June 16, 1806, Lewis added: "I killed a small brown pheasant today; it feeds on the tender leaves and buds of the fir and pitch pine." Clark wrote on June 28, 1806: "I killed a Small black pheasant; this bird is generally found in the Snowey region of the mountains." The differences in descriptions appear to reflect the differences between a female (mostly brown) and a male (mostly black).

Ruffed grouse are often believed to be the most widely distributed grouse along the route of the Lewis and Clark expedition. Nevertheless, there are only three clear observations in the journals—one in western Montana and the other two near Fort Clatsop, Oregon. On February 5, 1806, at Fort Clatsop, Lewis wrote: "Fields [Joseph Field] brought with him a pheasant which differed little from those common to the Atlantic states; it's [sic] brown is rather brighter and more of a reddish tint. It has eighteen feathers in the tail of about six inches in length. This bird is also booted as low as the toes. The two tufts of long black feathers on each side of the neck most conspicuous in the male of those of the Atlantic states is also observable in every particular with this." On March 7, 1806, Lewis added: "A bird of a scarlet colour as large as a common pheasant with a long tail has returned, one of them was seen today near the fort by Capt. Clark's black man, I could not obtain a view of it myself."

The writings of Lewis and Clark offer important insights into historic changes in the abundance and distribution of grouse. This is particularly notable for the greater prairie-chicken, sharp-tailed grouse, and greater sage-grouse. For example, based on the current distribution of

greater prairie-chickens, a retracing of the Lewis and Clark route would not likely produce any observations except for a small area where greater prairie-chickens expanded their range into central South Dakota (north of their original distribution). Although it is likely that sharp-tailed grouse could currently be observed along portions of the route in South Dakota, North Dakota, and eastern Montana, they have been completely extirpated along the route in western Montana, Idaho, and Washington. Greater sage-grouse have also been wiped out from substantial portions of the route such as southern Washington, an area where Lewis and Clark considered them to be abundant. When these observations of prairie grouse are considered in total, they illustrate widespread declines in both abundance and distribution.

"Mountain cock," "pheasant," "cock of the plains," "prairie hen," "fowl of the plains," "prairie fowl," and "long-tailed heath cock" were all names used to describe a single species—the greater sage-grouse. The variety of names illustrates the nature of discovery. Because the sage-grouse had never been described in print before, Lewis and Clark did not know what to call it. They also provided the first written account of the blue grouse and previously unknown subspecies of sharp-tailed grouse, spruce grouse, and ruffed grouse. When considered in total, this was a remarkable and inspiring feat for adventurers facing the hardships of the frontier in the early 1800s.

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