Efforts to re-establish the Gould's turkey in the Southwest continue as biologists cope with a harsh climate and often-frustrating red tape.

■ Jim Heffelfinger

eep in the remote canyons and mesas of Mexico's Sierra Madre Mountains lies a precious resource of untapped potential. This resource is not listed on the stock market, but it's surely more valuable than all other commodities. After all, "value" is not always easy to define, but it's priceless to anyone whose hair is stood on end by the thunderous gobble of a hot boss tom at daybreak.

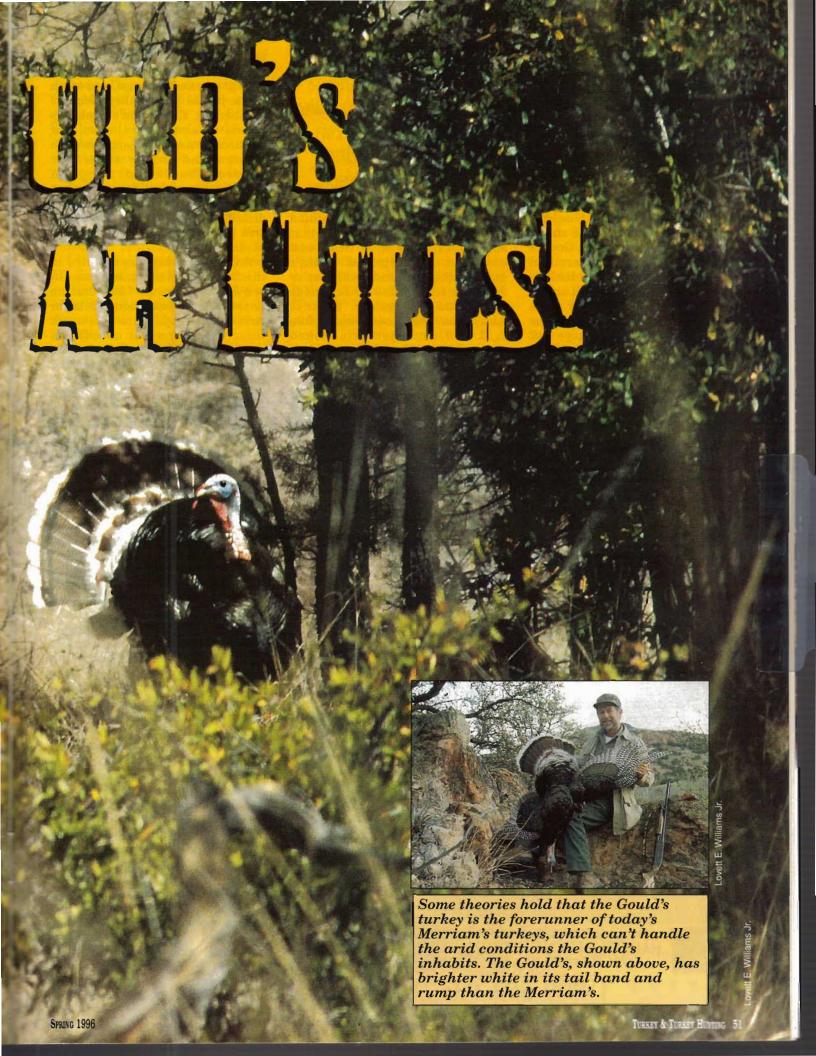
The resource is the little-known Gould's turkey of northern Mexico and the American Southwest. The Gould's turkey, *Meleagris gallopavo mexicanus*, is frequently considered the fifth subspecies in the United States. Although Gould's turkeys appear abundant and well-distributed in Mexico, they occur only in isolated areas in the southwestern United States. Compared to the Merriam's, Eastern, Rio Grande and Osceola, little is known about this turkey, which was first described by J. Gould in 1856.

Physical Differences

Some physical differences set the Gould's apart from other turkeys, but similarities overlap with all turkey subspecies. The Gould's is the largest of the five subspecies in weight and body measurements. This difference is not enough to discern in the field, but it shows up consistently when comparing averages with other subspecies.

In appearance, it looks most similar to the Merriam's, Meleagris gallopavo merriami. However, the Gould's

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body feathers have more green iridescence than do the Merriam's. Further, spurs in the adult Gould's tom are small or sometimes absent. Even older gobblers commonly have only ½inch spurs.

The most notable difference between the Gould's and other turkeys, however, is the color of its terminal band on the tail and rump feathers. The ends of these feathers are snow-white in the Gould's, giving it a decidedly white rump. The white tail band on the Gould's also appears wider. The terminal band on the Merriam's tail band is often considered white, but it's actually more cream or buff color when compared to a Gould's. Still, some individual Merriam's turkeys will have pure white tail bands. When seeing their first Gould's turkey, many hunters remark about all the white it carries.

This similarity with Merriam's is no coincidence. Some researchers believe the Merriam's turkey originated from the Gould's in prehistoric times. No archaeological evidence of the modern Gould's turkey, M. gallopavo, has been found throughout the Merriam's current range. The only known predecessor is a medium-sized prehistoric turkey, M. crassipes, which is now extinct. Archaeological evidence suggests the Merriam's turkey was a relatively recent addition to the landscape, coinciding with the time of European settlement.

The first Gould's transplant in the United States was on the Fort Huachuca Military Reservation southeast of Tucson.

The most common theory behind the origin of the Merriam's is that American Indians in the Southwest obtained domesticated Gould's turkeys through trade with native Mexican tribes. The theory holds that these domestic turkeys escaped or were abandoned before A.D. 600, and then established themselves in the wild as the birds we call Merriam's. Another theory holds that the Southwest was once less arid, which allowed the natural spread of Gould's turkeys northward.

Other Differences

Some experts note differences in the gobble and alarm putt of the Gould's turkey and other subspecies, which might create an opportunity for some entrepreneur to market a bilingual diaphragm call. I'm not sure it makes any difference. Turkey gobbles already sound Spanish to me, and some mornings my first yelps sound decidedly Latin to them.

The historical distribution of the Gould's turkey appears to have

been throughout the Sierra Madres in the Mexican states of Sonora, Chihuahua and Durango, and south to the Balsas River Valley. North of the border, the Gould's probably inhabited almost all the isolated mountain ranges in southeastern Arizona and southwestern New Mexico. The current range in Mexico is probably somewhat smaller, but the bird is still widely distributed throughout the extensive pine- and oak-covered Sierra Madres.

A Gould's turkey was collected in the San Luis Mountains in southern New Mexico in 1892, but no physical documentation exists for Arizona. Turkeys were present in these mountains, but nobody can say for sure which type. In the late 1800s, Arizona's settlers were generally too busy dodging the Apache's arrows to worry about turkey taxonomy.

North of these small, somewhat drier mountain ranges is a large expanse of inhospitable desert, which serves as an effective barrier from the Merriam's. These birds occur throughout the northern, higher-elevation country.

Given that the Gould's turkeys in New Mexico currently move back and forth between Mexico and Arizona, it seems logical that birds in southeastern Arizona in the late 1800s were also Gould's rather than the distant Merriam's.

These original populations declined as the westward expansion of white settlers reached southern New Mexico and Arizona. By World War I, turkeys had largely disappeared from southeastern Arizona. Historical populations of the Gould's have held on in the Peloncillo, Animas, and San Luis mountains in southern New Mexico near Arizona. A stable population of 100 to 150 birds still inhabits this area, and it has been monitored for more than a decade by Professor Sanford Schemnitz and his graduate students at New Mexico State University.

Restocking a Subspecies

In the 1950s, an aggressive restocking program by the Arizona Game and Fish Department transplanted Merriam's turkeys into most of the mountains of southeastern Arizona.

These Merriam's transplants met



with limited success in the drier mountain ranges of southeastern Arizona. The reason might be that the Merriam's is not the bestadapted subspecies for the climatic and habitat conditions of southeastern Arizona. It seems logical that if the Gould's evolved in drier mountain ranges, it should be better suited to conditions in southeastern Arizona.

The first Gould's transplant in the United States was on the Fort Huachuca Military Reservation in the Huachuca Mountains southeast of Tucson. These mountains contained a remnant population of Merriam's turkeys from an early Arizona Game and Fish transplant in 1950.

Through liberal hunting seasons and an active trapping program, Fort Huachuca biologists removed as many Merriam's turkeys as possible in the late 1970s and early '80s. By 1981, Fort Huachuca personnel could not locate any Merriam's birds.

In 1983, 17 Gould's turkeys were brought into the United States and quarantined for 30 days, in accordance with U.S. Department of Agriculture regulations imported live poultry. Of the 17 birds, nine survived the quarantine and were released.

In 1987, 29 more Gould's birds were imported and quarantined at the fort. After quarantine, 12 turkeys were released, including five bearded toms. A drought hit the country in the late 1980s, and the newly released turkeys struggled. However, in 1990, normal rainfall returned to the region, and the population has increased each year since.

However, a nagging uncertainty remains that a few Merriam's remained when the Gould's were brought in. Therefore, it's possible the gene pool has been contaminated. However, birds in the current population appear identical to stock brought from Mexico. It's hoped that future genetic tests will answer this question.

New Cooperative Efforts

Cooperative effort between the Arizona Game and Fish Department, U.S. Forest Service, Southeastern Cooperative Disease Study Group, National Wild Turkey Federation, and Mexican biologists

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at Centro Ecologica de Sonora yielded the most promising chance to re-establish a widespread population of Gould's turkeys in the United States. In 1993, the program's leaders received permission to live-trap Gould's turkeys near the village of Yecora, Sonora, Mexico, and release them in the United States without the 30-day quarantine. This was a major breakthrough, because previous quarantines limited the success of the transplants.

Nine jakes and 12 hens were trapped in January 1994 and released in the Galiuro Mountains about 90 miles east of Tucson. The site was selected because of its isolation and the lack of a remnant Merriam's turkey population. Biologists hoped that once this population became established, it could serve as a source for Gould's transplants for other mountain ranges.

However, delays and other minor problems are inevitable when working on international programs. The

remote capture site, communication problems — no phone in Yecora and a last-minute snag at the border caused the birds to be held three to four days in transport boxes. The birds weathered the capture and transport, and came out flapping upon release. However, stress caused by the additional holding time caused an unusually high post-release mortality. After one year, 18 of the 21 turkeys were dead.

Conclusion

Fortunately, most of the bureaucratic barriers and logistical problems have been resolved. Once again, biologists hoped to attempt a more successful transplant in the winter of 1995-96.

As in turkey hunting, turkey management often requires the three P's: Patience, Perseverance and a Positive attitude. With a little luck, some future turkey hunter might be treated to the sound of a boisterous Mexican gobbler trying to convince a local "senorita" that he is mas macho.

Jim Heffelfinger is a regional game specialist for the Arizona Game and Fish Department. He has worked as a wildlife biologist within the range of the Gould's, Merriam's, Rio Grande and Eastern turkeys.





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