

VOLUME 30 / NUMBER 5

Zoogor

SEPTEMBER/OCTOBER 2001

30 BIOALMANAC
Whooping it up with cranes, forking over chopsticks,
consuming conservatively, and panning an ape's appellation.

29 BOOKS, NATURALLY
In too-fast unguulates and uneaten fruits, Connie Barlow finds
The Ghosts of Evolution living among us.

6 NOTES & NEWS
From expectant elephants to tricking and treating—and an Annual
Meeting—it promises to be an awesome autumn at the National Zoo.

DEPARTMENTS

A jewel in Europe's green crown, Spain offers a host of urban as well as
rural habitats for a surprising portion of the continent's wildlife.

20
España Verde: Spain's Living Landscape
BY HOWARD YOUTH

18
Meet the bonobo, a primate first recognized as a distinct species
less than a century ago. Scientists have since discovered that
our close cousin plays by its own rules in life and love.

BY MATTHEW HUY
Not Your Average Ape

8
War, poverty, and corruption in central Africa have made a
multi-billion-dollar business out of the troublesome trade in "bushmeat,"
challenging conservationists to rethink their strategies.

BY JOHN TIDWELL
Fall of the Wild

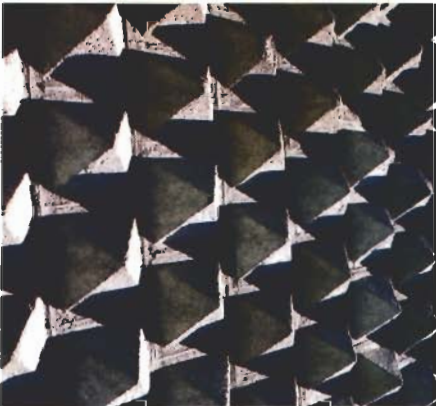
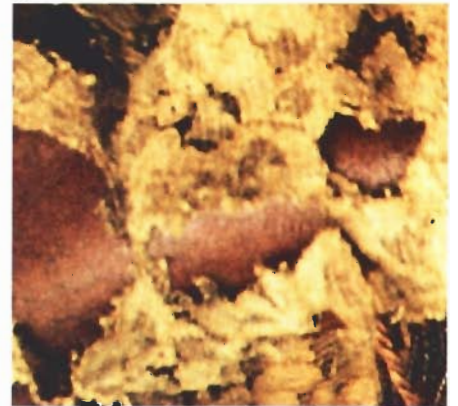
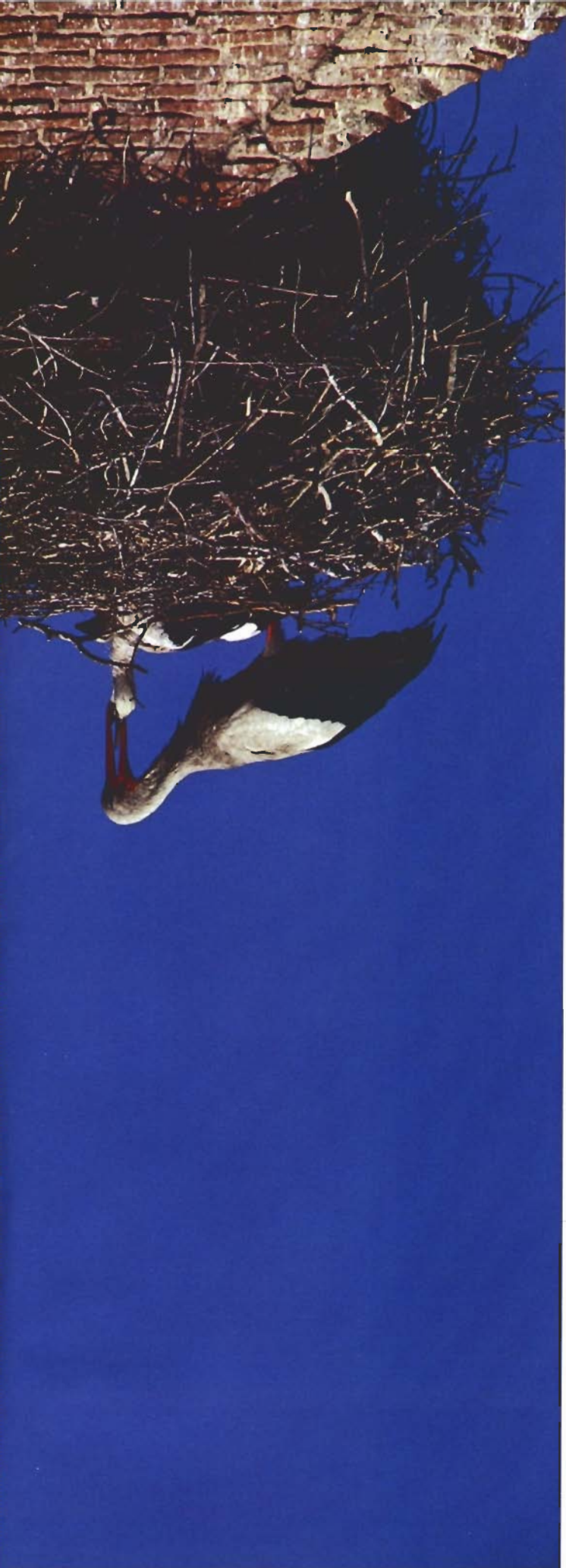


TABLE OF CONTENTS

Landscapes
Living
Spain's



Verde
España



Originally a Celtic town, Segovia fell to Roman conquest in 80 B.C.E. The Moors settled there about 700 years later but were ousted by the Christians in 1085. These successive societies built houses of worship, forts, administrative buildings, homes, and other structures. Their handiwork left much to inspire the historian or tourist, but birds prize Segovia's architecture for a different reason—it provides top-notch nest sites.

A naturalist visiting Segovia sees the town a bit differently than the typical visitor. First stop: the 163-arch aqueduct, a 2,000-year-old remnant of Roman ingenuity built of massive, mortar-less granite blocks. Here, thousands of common swifts (*Apus apus*) and a handful of thrushes called black redstarts (*Phoenicurus ochinus*) nest.

Next stop, the huge 23-chapel Segovia Cathedral, built in the 16th century. This "Lady of All Cathedrals" could also be considered one of the world's largest and most costly birdhouses: Its extensive roofwork attracts cavity-nesting birds such as sickle-billed crows called choughs (*Pyrrhocorax pyrrhocorax*), rock (*Petronia petronia*) and house sparrows (*Rissa domestica*), spodeless starlings (*Sturnus unicolor*), rock doves (*Columba livia*), and small, gray-headed crows called jackdaws (*Corvus monedula*). This palatable guest list draws a local peregrine falcon (*Falco peregrinus*) or two, while the peregrine's smaller, more colorful cousin, the lesser kestrel (*Falco naumanni*), nests on nearby rooftops.

Fielding's guide to Spain of Segovia, and gives it a five-star rating. By all accounts, wild birds can't read, but Segovia is also a prime stop for many of them.

For centuries a thriving, fought-over outpost, the central Spanish city of Segovia is now a popular tourism destination. "No city in Spain presents such a dramatic appearance..." says the Fielding's guide to Spain of Segovia, and gives it a five-star rating. By all accounts, wild birds can't read, but Segovia is also a prime stop for many of them.

BY HOWARD YOUTH



GABRIEL SIERRA CONZALEZ



size of Spain—each have almost 60 million. the United Kingdom—which is about half the 40 million people. By contrast, France, Italy, and Oregon—it supports a stable population of about France—a bit more than twice the size of by European standards. Slightly larger than like other European countries, but is jumbo-sized factor plays strongly: Spain is not over-populated dance of open, rugged land. However, another economic hard times contributed to Spain's abun-

Marginal soils, a dry climate, and decades of rent boom. time if the Spanish economy continues its cur- just outside Madrid. This trend will likely con- for second homes, many built in the mountains United States. There is also a burgeoning market far out into the countryside as they do in the growing cities such as Madrid, suburbs now spill

However, especially around high-priced and Spain to keep naturalists busy for many lifetimes. rat alterations, there remains enough of wild- away wildlife enclaves. Despite widespread habi- hold rich forests that provide countless tucked- plateau laced with even higher mountains, which bones of wild habitat. Much of the country is high- by hedges, wooded streams, cliffs, and other rib- chards, vineyards, and pastures stitched together

now a continuous patchwork of crop fields, or- tion forest and grasslands. The rural scenery is away most of the country's original low-eleva- largely agricultural. Centuries of farming swept of the big cities, Spain's countryside remains live in tightly packed towns and cities. Outside

In many areas, it is still true that the Spanish

Spain's economy lagged from the Spanish Civil War in the mid-1930s through much of the rule of dictator Francisco Franco, who died in 1975. During that time the strongly agrarian economy sustained itself on traditional agriculture, which slowly advanced over the decades. Today, the country's economy is dynamic and booming. Farms are increasingly efficient and modernized, and irrigation is spreading.

Spain's economy lagged from the Spanish Civil War in the mid-1930s through much of the rule of dictator Francisco Franco, who died in 1975. During that time the strongly agrarian economy sustained itself on traditional agriculture, which slowly advanced over the decades. Today, the country's economy is dynamic and booming. Farms are increasingly efficient and modernized, and irrigation is spreading.

History, climate, building trends, size, and population seem to all play a part in explaining why Spain remains full of rugged, rural land- scapes that entice birds. "The Spanish people, rich and poor, congregate in town or village, and vast stretches of the campo, as they call it, are thus left uninhabited, *despoblados*—relinquished to natural conditions..." wrote British hunters and adventurers Abel Chapman and Walter J. Buck in their 1893 book *Wild Spain: Sport with Rifle, Rod, and Gun, Natural History, and Exploration*. Today, although Chapman and Buck's vision of a "...country so largely abandoned to nature... untouched by man, untamed and glorious in pristine savagery..." has changed, the visitor still gets their sense of "the splendid aban-

"Last bastion" is a term often used to describe Spain's importance as a haven for Europe's declining birds, and for good reason. Spain has the most intact and varied avifauna of any Western European country. The *EBCC Atlas of European Breeding Birds*, an international effort to chart European bird species' breeding abundance and distribution, reports that Spain holds the largest nesting populations of 99 species—about one-fifth of Europe's bird species. In many cases, other European countries' totals of these species don't

Spain's Natural Bounty



species remain full time to breed and feed. mostly cultivated countryside, where many other mute, feeding on the bounty of the surrounding, and towns shelter nesting birds that reverse-com- with home possibilities for birds. Its small cities is littered with historic towns and ruins riddled for European wildlife. The Spanish countryside Spain is also beloved by naturalists as a hotspot known for its unique customs and delicious food, history in seemingly timeless tranquility. Well- Spain, where cultural history often meets natural

Segovia's wildlife appeal is not unusual for lows called craeg martins (*Ptyonoprogne rupestris*). (*Ciconia ciconia*) and dozens of ash-colored swal- home to nesting and roosting white storks Today, it is (Isabella fame) was named queen. Today, it is where Isabella of Castile (of Ferdinand and is was embellished by centuries of rulers and is streets yield to the Alcazar. This fairy tale fortress And a few minute's walk away, tight, winding

LEFT: BUZZARD (BUTEO BUTEO). RIGHT: SEGOVIA'S ALCÁZAR CASTLE.



GABRIEL SERRA DOMÍNGUEZ



VIDA RUSSELL

Birds prize Segovia's architecture for a different reason—it provides top-notch nest sites.

SPAIN

These days, after a decades-long decline, white storks seem to be recovering in many parts of their range. Many scientists believe that recent wet winters on the birds' African wintering grounds are responsible. Spain, however, plays an important role. Set along white storks' western migratory path (Turkey provides the key continental link east of the Mediterranean), Spain is important to storks that nest farther north and pass by there on their way north or south to Africa. Increasingly, fewer storks make the entire journey. Instead, 3,000 or more white storks spend the winter in Spain.

they hit just after chicks have hatched. Wet snaps can cause high mortality, especially if weather nurtures young storks, although cold, rivers, fish and frogs. Also, the region's dry, warm and other prey, such as lizards, snakes, and, near fallow fields abundant in insects such as grasshopper

Wetland drainage and modernized agriculture, as well as drought in their African wintering grounds, changed the storks' prospects, causing sharp declines across Western Europe in the 20th century up through the 1980s. They vanished from some countries, such as Denmark, Sweden, Switzerland, and Italy, where some now occur only thanks to costly reintroduction programs. In Western Europe, Spain held—and still holds—by far the largest population at more than 16,000 breeding pairs. Traditionally, Spain has been a stork stronghold for the same reasons that many other birds remain far more common there than elsewhere: First, marginal soils often require Spanish farmers to alternate their fields, leaving some to go fallow. Open pastures are another common landscape in these areas. Pastures and

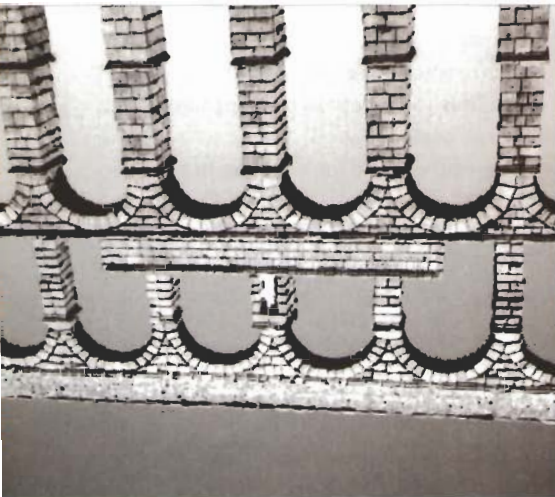
cranial food into their chicks' bills high above the fray, in bulky stick nests stacked and woven atop terra-cotta rooftops and towers.

In Segovia and many towns throughout central and southern Spain, no one can ignore perhaps the largest backyard birds in the world: white storks. With six-foot, black-and-white wingspreads and candy-red legs and dagger bills, few birds seem as impressive, and at times as awkward, while perched on a rooftop. Over the centuries white storks adopted human towns as nesting habitats, as long as prime feeding areas—pastures, wetlands, or fallow fields—lay nearby. Although people valued them as good luck symbols in Spain and other countries to the north, Germany and other countries to the north, the birds seem too busy raising their own young to concern themselves with human affairs. They

Look What the Stork Dragged In

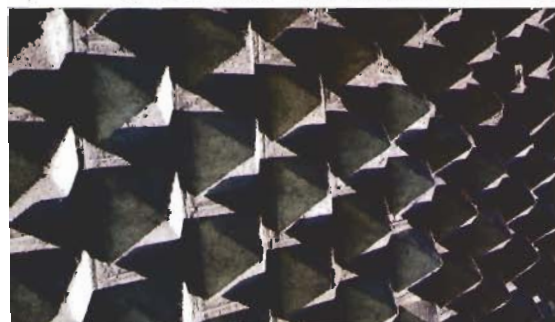


Germany is also smaller but is home to about 80 million people.



LEFT: EUROPEAN BEE-EATER (*MEROPS APIASTER*), BELOW: AN AQUEDUCT IN SEGOVIA.

VICIA RUSSELL

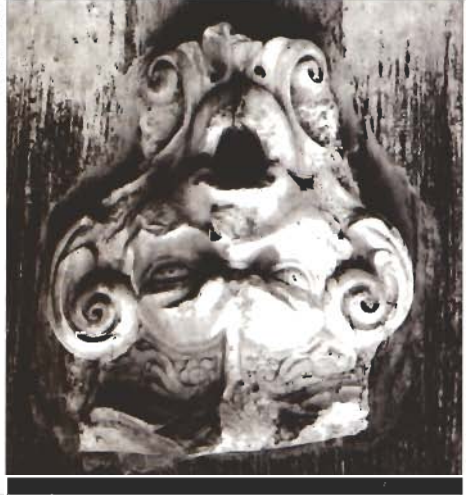


ABOVE: ARCHITECTURAL DETAIL ON BUILDING IN SEGOVIA.

VICIA RUSSELL

GABRIEL SIERRA GONZALEZ

STONEWORK IN SLOVAKIA.



VIDA RUSSELL

ABOVE: LESSER KESTREL (FALCO NAUMANNI).



Part of the switch in wintering habits may stem from climate change, which scientists also speculate may explain other changes in Spanish bird behavior, such as why barn swallows (*Hirundo rustica*) now arrive there from African winter quarters about a month earlier than they did 30 or 40 years ago. But trash also likely provides part of the enticement. Large dumps in the south and center of Spain provide a stinky smor-

gasbord not only for locally nesting storks but also those that migrate there from Germany, the Netherlands, France, and other countries. Eating trash does not seem to harm the storks but rather broadens their feeding horizons. Just outside Madrid, at Spain's center, storks can now be found at the dump year-round. "What we have seen is that they mainly feed their young natural foods around here," says Jose Aguirre, a biologist



RED-LEGGED PARTRIDGE (ALECTORIS RUFUS).

Madrid—prospected for nest sites in the dangling mass below.

The past 15 years have brought significant changes to some Spanish farmlands. Irrigation, supported in part by European Union funds, is spreading, as are larger, more mechanized farms where hedgerows and other wild features are carved away in order to maximize yield. Extensive fields of sunflower, for example, do not provide the varied plant and insect life that many open-area birds need to survive and feed their young.

Europe's heaviest flying birds, turkey-sized great bustards (*Otis tarda*), are another potential loser if Spain's agriculture changes dramatically. These striking cinnamon, gray, and white creatures, which can weigh up to 33 pounds, benefited from widespread deforestation centuries ago, inhabiting grasslands and fallow fields that sprung up after dry-area oak woods fell in central and southern Spain. Today, Spain's great bustard population—at about 17,000 birds—is the healthiest in Europe. Their habitat consists no longer of grassland, but rather cereal and fallow fields. A strong population persists just outside of Madrid, although spreading development threatens it. This bird's smaller cousin, the little

with the landscape when seen from above, so the birds fly right into them. Storks and other birds are also electrocuted when they touch the lines. Electric companies began installing colored disks that reveal the wires to incoming birds. Where present, these markers apparently reduce bird mortality.

Although a menace for some birds, the growing electric power tower network also provides important nesting sites for other species. Across Spain's countryside, and in many other European countries, white storks are increasingly nesting on these elevated, out-of-town towers, as are ravens (*Corvus corax*), magpies (*Pica pica*), and some other birds.

Wherever white storks nest in Spain, other opportunists follow. For example, one day while birding just outside of Madrid, a friend and I spotted a large, lumpy stork nest, perhaps six feet tall and made of sticks stuffed into the frame of a rusted old radio tower. One stork—probably the female, which spends more time at the nest—was incubating her eggs atop the nest, while a jackdaw, house sparrow, and four monk parakeets (*Myiopsitta monachus*)—South American parrots introduced and expanding around

who studies white stork nestling survival. "What they keep for themselves is food from rubbish dumps." Around Madrid, nestlings seem to eat mainly insects, with a few frogs, snakes, or lizards. Aguirre and his colleagues discovered this by examining the pellets that young and adult birds regurgitate daily.

Seeking clear transmissions, radio, television, and telephone companies have been busy erecting towers across Europe. Storks, seeking clear sight lines and good nest supports, flock to these structures. Just outside Madrid, for example, several dozen pairs nest on the National Radio transmission towers, including one so high that the storks and their nest are nearly invisible to the naked eye. "That is probably the highest stork nest in Europe," notes Aguirre as we drive past the fenced-off tower field.

Also, electric power line towers march across the landscape like seemingly endless, giant clotheslines. The lines prove a deadly obstacle to many storks, as well as to other birds such as bus-tards, cranes, and lapwings. These large birds collide with cables when dropping down to earth for a landing. In many cases, younger birds appear to be more vulnerable. The wires often blend

"Last bastion" is a term often used to describe Spain's importance as a haven for Europe's declining birds, and for good reason.



GABRIEL MIRERA GONZALEZ

JIDA RUSSELL



RIGHT: THE ALCAZAR. FAR RIGHT: GREAT BUSTARDS (*OTIS TARDA*).



GABRIEL SIERRA GONZALEZ

bustard (*Tetrax tetrax*), also abounds in Spain, with more than 200,000 pairs.

The treeless landscape perpetuated by cereal fields is critical for many predatory birds as well, including the sleek lesser kestrel. While the news for Spanish wildlife living in Spain's inhabited rural landscapes is generally good, the story of this small falcon is a marked exception. In the early 1960s, more than 100,000 pairs nested in Spain. Today, between 5,000 and 8,000 pairs—by far the most remaining in Europe—live there. These sweet-potato-orange, buff, and gray fal-

cons nest in small colonies in church steeples, castles, and other high buildings, fanning out at dawn to hunt insects in surrounding farm fields. Still a familiar sight in and around Seville, where they nest near and circle the famous mosque-turned-church called the Giralda—the lesser kestrel's fortunes are further hurt when old buildings are fixed up. In recent years, many more churches are being restored, perhaps due to the country's growing affluence. Lesser kestrels are disappearing especially fast in areas outside Madrid, where houses and roads replace their feeding areas.



Wine Stoppers for Wildlife

Extremadura, Spain's southwest province, is the world's second largest cork producer after Portugal. Native cork oaks grow amid rough pastures, their famed bark periodically stripped to stopper Europe's wine bottles. But the province is known not only for its cork, but also its pork. *Fata negra* (black foot) ham is a regional specialty

famed for its flavor, enriched from the cork oak acorns that dark Extremaduran pigs snuffle up beneath the gnarled, small-leaved trees. In this extensive habitat, a good portion of Europe's common crane (*Grus grus*) population winters, also eating the acorns. During spring and summer, when cranes are on Scandinavian nesting grounds, turtle doves (*Streptopelia turtur*), wood-

chat shrikes (*Lanius senator*), booted eagles (*Hieraetus pennatus*), and black kites (*Milvus migrans*) nest there. The growing trend for wine-makers to use plastic stoppers, however, concerns cork growers, and environmentalists alike. If plastic stoppers, currently used in bottling a small but growing percentage of European wines, prevail in years to come, the cork market might take a nosedive, forcing cork oak acreage to decline as growers plant different crops.

Another famed product of Spain, the olive, covers far more area but provides poorer digs for wildlife. Spain, along with Italy, Greece, and Tunisia, is one of the world's top olive producers. In large groves spanning the drier parts of the country, rural creatures live, including a good part of the continent's largest population of little owls (*Athene noctua*), diurnal insect-eaters that often seek shelter and nest in olive trees and nearby stone structures. Large groves, however, are monocultures catering to only a relatively few species. Small groves near other habitats, such as open fallow fields, sustain more biodiversity.

Perhaps no other bird concerns hungry Spaniards more than another rural denizen, the red-legged partridge (*Alectoris rufa*). During the



SEGOVIA CATHEDRAL

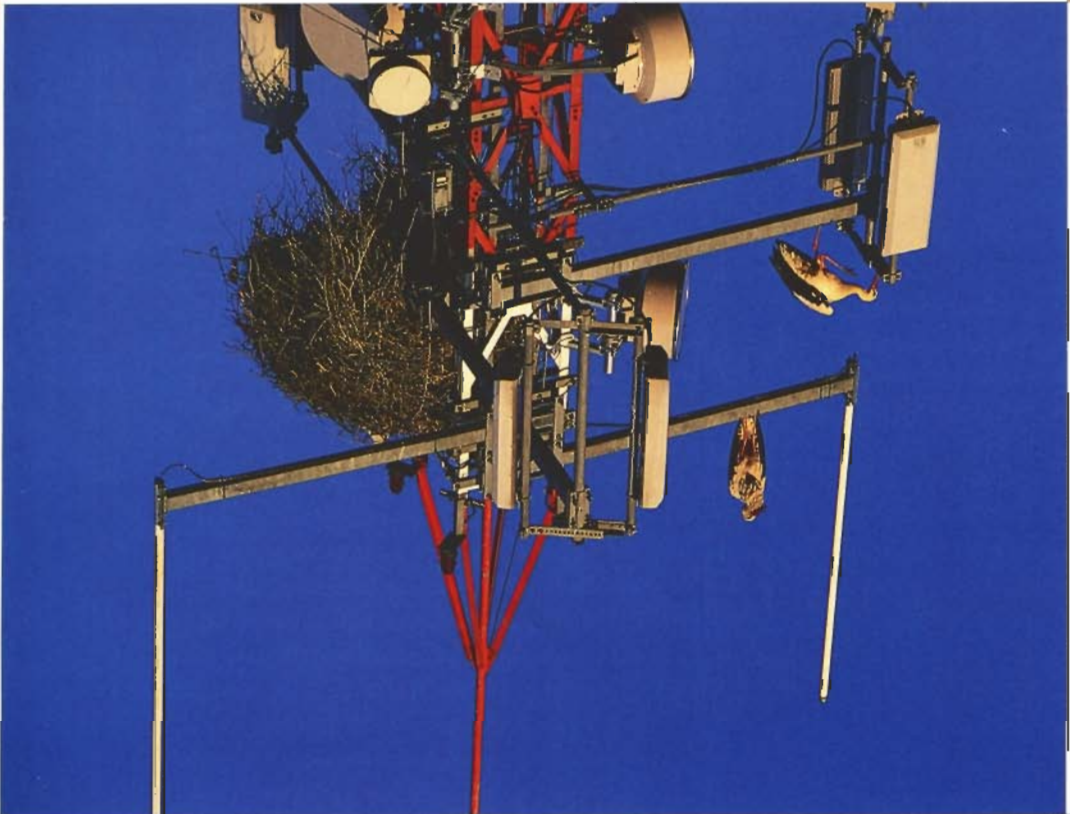
LEFT: WHITE STORKS (*CICONIA CICONIA*)



GABRIEL SIERRA GONZÁLEZ

Lesser kestrels are disappearing especially fast in areas outside Madrid, where houses and roads replace their feeding areas.

MARTA YOUTH



fall hunting season, this plump gamebird, called *perdiz* in Spanish, is familiar fare in restaurants nationwide. Despite widespread hunting pressure and declines in other Mediterranean countries, red-legged partridges remain common in a wide variety of Spanish agricultural landscapes, from open fields to olive groves. This bird's future did not seem too bright to Abel and Buck, who, clearly perturbed, wrote in 1910: "The red-leg—under the murderous system of shooting, year in and year out, over decoy-birds—would be exterminated within three or four years in any other country save this. It is merely the incredible fecundity of the bird and the vast area of waste lands that preserves the breed." One modern problem is that farmed partridges are often introduced, making the wild population appear far more abundant than it is. Introductions also muddle the gene pool because farmed partridges sometimes have mixed lineage, being hybrids that are part non-native chukar (*Allectoris chukar*) or rock partridge (*Allectoris graeca*).

It may be premature to say that Spain will always remain a haven for birds falling in other

European countries. While public and governmental concern for wildlife issues is growing in Spain, economic growth and enterprise are often more highly prized, bringing with them formidable environmental changes. Yet for long-term survival, species like the great bustard or lesser kestrel have no better stronghold than Spain. The future may yet be bright for these birds. Standing on the Alcazar's fortified walls, looking over a seemingly endless patchwork of farms, river bends, and woodlots, one feels a calming timelessness. A black vulture, Europe's largest raptor, soars past, and the clapping of

—Howard Youth, a Contributing Editor to ZooGoer, is living in Madrid while he explores European nature.

not-so-wild landscapes. Z

stork bills fills the air. From this vantage point, and countless others across Spain, it is easy to believe there will always be a lot of wild in Spain's



RIGHT: WHITE STORKS OFTEN PERCH HIGH ON AN TENNIS COURT IN MADRID, ABOVE LITTLE OWL (ATHENE NOCTUA).