

A LIMPkin (*Aramus guarauna*) ON THE NIAGARA RIVER

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A Limpkin on the Niagara River shore at Lewiston, Niagara County 9 November 2022 was the first for New York State, pending acceptance. It was seen by many observers, often feeding on non-native snails, through 18 November. Extralimital records of Limpkins north of their historical tropical and subtropical range have increased greatly in recent years, and this record was part of an unprecedented incursion throughout the eastern United States during 2021 and 2022. Given concerns over the bird's well-being, in combination with forecasts of freezing temperatures and heavy snowfall, the Limpkin was taken into care, transported to Delaware for further rehabilitation, and successfully released into the wild in South Carolina. The circumstances of this Limpkin's occurrence at Lewiston, and details of the many extralimital records in 2021 and 2022, are discussed below.

THE DISCOVERY

Tuesday, 15 November 2022, started like many fall days do for me. I was lake-watching from Krull Park in Olcott, Niagara County, on the shore of Lake Ontario, only three miles from my home. There was heavy overcast, the wind was light, and there was an excellent flight of Red-throated Loons (*Gavia stellata*). I tallied 514 before the rain started, which stopped the flight and sent me home.

I was content after having one of the best counts I have ever made of this loon when I sat down at my computer. Checking emails, I noticed one from Connie Adams, a friend who works at the NYS Department of Environmental Conservation (NYSDEC). She often sends me photographs of birds to identify or confirm, which she gets from people she works with. The subject was "Bird ID" and the text was simply "What do we have here? Photo'd by my fishing buddy in Olcott I think." I clicked on the attachment. My eyes widened and pulse quickened. The photograph was of a Limpkin, walking around on cut grass with some dead leaves!

Immediately, I wrote back, asking for the precise location and when the picture was taken. Now having a sense of urgency, I decided to text as well. Connie quickly responded: the bird was not seen in Olcott, it was at the Lewiston boat ramp on the Niagara River, also in Niagara County. I still did not know when the bird was seen but I sent out a text alert to Western New York birders and headed for Lewiston. I was confused and had a sense that something was not right about this. I had seen Limpkins before and I associated them with wooded swamps and other wetlands. The habitat around the Lewiston boat ramp had nothing to attract a Limpkin, I thought. The Niagara River has steep banks, with essentially no shallows. Upon my arrival in Lewiston, three other birders were already looking. We searched the area for the next hour, not seeing any habitat which we

thought would be appropriate for a Limpkin and, disappointingly, not finding the Limpkin. I was fairly convinced that the Limpkin had made an inappropriate stop in Lewiston and, after finding no useful habitat, had simply moved on.

Two birders left and I texted Connie and asked if she could find out precisely where Frank Campbell, the fishing captain, had seen the Limpkin. She phoned me back. The first thing she said was that the bird had been there since Wednesday, 9 November—a week! Then she told me that Frank said that the bird hides in the weeds next to the harbor master building, which was right where I was standing while talking to her. I looked up at the weed-covered slope in front of me and almost immediately noticed some movement. After an initial jolt of excitement, I calmed down and reasoned that it was probably just a squirrel. I carefully lifted my binoculars while simultaneously trying to listen to Connie on the phone. I could hardly believe my eyes! “Connie!” I said, “I see it!”

We had walked by this spot probably half-a-dozen times without seeing the bird. Perhaps this was not that surprising because we were not anticipating that the bird would be hiding in the weeds! I sent out another text alert to WNY birders, confirming this thrilling find. I also texted Shai Mitra, who quickly posted the discovery to the New York State birding email list. Although frequently hidden in the weeds, the bird was seen by practically everyone who tried for it over the course of this and the following three days. It stayed in a 50 yard stretch of weeds at the base of a steep slope, only very occasionally wandering out into a small patch of cut grass, where Frank Campbell had captured his cell-phone image. I only know of the Limpkin being seen to fly once, when it was startled by someone slipping and falling on the stairs that go down the slope. The noise prompted it to take a short flight and land on the cut grass.

THE WEATHER AND THE BIRD’S WELL-BEING

The mystery as to why the Limpkin was staying in this area soon became apparent to anyone who watched it. It was feeding on an abundance of grove snails, *Cepaea nemoralis* (Susan J. Hewitt, pers. comm.; Wayne Gall, pers. comm.), also known as brown-lipped snail, which is a widespread nonnative species from Europe (Hotopp and Winslow 2012; US Dept. of Agriculture 2022). One only had to wait a few seconds while it was foraging to see it catch, crack open and separate the shell, and dine on a snail. The sense of most birders who watched it was that it was doing quite well, finding and eating these fair-sized snails quickly and with relatively little effort. Interestingly, while the bird usually preferred to stay mostly hidden in the weeds, it seemed remarkably tolerant of people. For the most part, birders were careful not to push the bird by getting too close and making it feel uncomfortable. By quietly staying back, birders found that the bird would sometimes come surprisingly close to them, seemingly unconcerned with their presence.

Although the Limpkin appeared to be eating well, there was concern among the birding community that it could soon be in trouble. The forecast was calling for a storm of historic proportions in the region. Although Lewiston was

forecasted to be north of the worst part of the storm, it was still going to get several inches of snow and much colder temperatures. The storm was prognosticated several days ahead of time and the forecast remained consistent for every day that the Limpkin was present. A wildlife rehabilitator was alerted to the likely need for rescue at some point. This person was Karen Slote of WildCare of Western New York and the Erie County Society for the Prevention of Cruelty to Animals. Karen observed the Limpkin multiple times and believed that she would be able to capture it with a long-handled net when it became necessary (Karen Slote, pers. comm.).

Not everyone agreed that rescue was necessary or even advisable. This bird appeared to be doing fine and eating lots of snails, which seemed to be easy for it to find. Why rescue a bird that appeared to be healthy? However, the history of vagrants to this part of the world at this time of the year has taught us that many individuals, especially those that come from warmer climates, are not well-adapted to handling our winter storms. An Anhinga in mid December of 2020, west of Rochester, NY, is one example. The bird was not doing well and it was eventually captured by a wildlife rehabilitator. Unfortunately, it soon perished in captivity. The decision to capture the Anhinga was probably made too late. Birds often do not fare well in captivity and it is best if a rescue attempt can be made before the bird is showing visible signs of distress or illness. So, on Friday, 18 November, just hours before the weather would take a dramatic turn, Karen and her team went to work. However, the bird was more wary than anticipated and it easily scooted out of reach of her net.

The next attempt to rescue the Limpkin was made by Wild Kritters of Niagara County, another wildlife rehabilitation group, early that evening. They put out a long net that stretched from the top to the bottom of the slope. They waited for darkness and Frank Campbell contacted the Village to have the public lights turned off, in order to make it harder for the bird to see the net. Then, they slowly walked toward the Limpkin until it went into the net, where they were able to catch it.

REHABILITATION AND PLANNING TO GET THE BIRD SOUTH

The Limpkin was now in the care of the rehabilitator, Karen Slote, who provided email updates, which I forwarded to the various birding email lists. Despite appearances that the bird was eating well, it was underweight at 815 grams, versus the average range of 900-1200. Karen's emails give some idea as to the thought and effort that goes into rehabilitating a wild bird: "Although he was calm and accepting of human presence when he was wild and free, the Limpkin's behavior changed quickly after his rescue on November 18. I needed to do everything possible to make him comfortable. I filled his enclosure with willow branches, grasses and artificial plants so that it resembled the natural area he had been living in. Normally, Limpkins eat snails; unfortunately, the apple snails they eat are invasive and not allowed in NYS – so I needed to find him an alternate food source. I offered him a variety of options, including mealworms, waxworms,

earthworms, krill, and small fish like smelt and minnows. Presentation was important too. Limpkins forage in the mud and shallow water for their food, so in order for him to recognize these foods, I hid them in shallow plastic bowls filled with water or mulch.” Fortunately, Karen’s efforts paid off and the Limpkin rapidly gained weight.

Karen wanted to get the bird to Florida but it was illegal to ship wild birds into Florida. She considered driving it herself to some other place down south but she soon realized that the long drive could easily prove to be too stressful for this very wild bird. She eventually decided to get the bird to Tri-State Bird Rescue and Research, one of the premier wildlife rehabilitation centers in the United States. They are located in Newark, Delaware, a midway point between Western New York and the south. Tri-State affirmed that they would care for the Limpkin and then would help it to reach a destination in the south. Now with a plan in place, Karen and her team readied the Limpkin, along with another rescued bird, a Virginia Rail, for the drive to Delaware. She used a soft-sided carrier that would make it less likely for the Limpkin to injure itself should it start to get nervous during the ride. She also gave it and the rail an anti-anxiety medication. The trip came off without a hitch. The rail was released into a Delaware marsh while the Limpkin was accepted for rehabilitation at Tri-State in preparation for it to be moved further south. On Thanksgiving day, 24 November, Tri-State released the Limpkin at Francis Marion National Forest in South Carolina. As soon as the carrier door was opened, it flew strongly out of sight into the swamp!

LIMPKIN SYSTEMATICS

Four subspecies of Limpkin are recognized (Bryan 2020): *A. g. pictus* of Florida, Bahamas, Cuba, and Jamaica; *A. g. elucus* of Hispaniola and Puerto Rico (formerly); *A. g. dolosus* of Oaxaca and Veracruz in southern Mexico, south to western Panama; and *A. g. guarauna* of central and eastern Panama south through much of South America to Argentina. The main differences between the subspecies has to do with size and the amount of white markings on the wing coverts. eBird (Dec 2022) combines the first three subspecies, which have varying amounts of white on the wing coverts, into the “*pictus* group”, or Limpkin (Speckled). *A. g. guarauna* is Limpkin (Brown-backed). The latter is the smallest subspecies and it also lacks white on the wing coverts (Bryan 2020). The Lewiston bird is of the Speckled group, as are virtually all individuals in the United States.

RECORDS OF VAGRANT LIMPKINS

If accepted by the New York State Avian Records Committee, this will be the first record of Limpkin for the state (NYSOA 2022). Ten years ago, perhaps no one was predicting that a Limpkin would appear in New York some day. Even five years ago, few would have foreseen that possibility. But for a few months prior to its discovery on 9 November 2022, some astute birders were actually anticipating just that.

The reason for going from not even being on the radar, to expected, seems to be due to a nonnative invasive food source, the giant apple snail, *Pomacea maculata*. As a breeding species in this country, Limpkin has historically been restricted to Florida and possibly, the Okefenokee Swamp in Georgia (Wright and Harper 1913). Historically, they fed primarily on a native species of apple snail, *P. paludosa*, which is restricted to Florida and south Georgia (Bryan 2020). Since the giant apple snail was introduced and started to spread, the Limpkin has started to breed in states outside of Florida: Louisiana, Texas, Georgia, and possibly others. The new breeding sites are in watersheds where the giant apple snail has also been documented. Records outside of Florida are growing exponentially. For example, Limpkin has been recorded annually in Georgia since 2014, in South Carolina since 2017, and in Alabama since 2018 (eBird, Dec 2022). In Texas, the first state record was observed in May 2021. By the end of 2021, the state records committee had accepted 29 records with one such record involving at least 23 individuals! In addition multiple sites in Texas now have breeding records (Carpenter 2022). From the coincident expansion of the giant apple snail and the Limpkin, combined with the latter's fondness for apple snails, it is clear that the Limpkin is taking advantage of this nonnative food source. This has been verified by observation, with all breeding Limpkins found outside of Florida in recent years being in watersheds that also have the giant apple snail (Dobbs 2022, Minetor 2022).

Records of Limpkin really took off in 2021 and 2022 (eBird, Dec 2022). It was found in 13 states besides Florida in 2021, including provisional firsts for Texas, Arkansas, and Minnesota (Swick 2022). Although not in Swick (2022), West Virginia also recorded its first record in 2021 (West Virginia Bird Records Committee 2022). In 2022, it reached an astounding 23 states outside of Florida (records are from eBird, accessed Dec 2022, unless otherwise stated), and achieved provisional firsts for nine of those: Indiana, Iowa, Kansas, Kentucky, Michigan, Missouri, Nebraska, Wisconsin, and New York (Swick 2022). The year started with a few Limpkins north of Florida, in Mississippi, Georgia, South Carolina, Louisiana, and Texas. Historically, such wintering behavior outside of Florida was very rare. In April, northward movements were underway, with eBird records well north in Oklahoma, Mississippi, Alabama, and Georgia. May saw Limpkins pushing further north in Oklahoma, and there were sightings in Arkansas, Tennessee, North Carolina, and even reaching Missouri, Illinois, and Virginia. In June birds were reported in Kansas, Nebraska, Iowa, Indiana, and Virginia. July saw reports from further north in Iowa and Indiana, as well as in Wisconsin. August brought birds even further north in Wisconsin, as well as Limpkins in Minnesota (Minnesota Ornithologists' Union Records Committee) and Michigan. September saw Ohio add a record and October added another for Michigan. The last far northward straggler in 2022 was the one in Lewiston, first seen by Frank Campbell on 9 November. A December Limpkin that appeared in Kentucky was also beyond its typical range, as well as a first for the state (Swick 2022).

Many people, birders included, assume that extralimital records of birds are usually due to the weather. The chronological accounting in the preceding paragraph, with northward movements detected in every month from April to November in 2022, shows that it is extremely unlikely for weather to be the main factor in producing these Limpkin records.

Birds disperse for many different reasons such as habitat change, food decline, temperature changes, to promote gene flow and avoid inbreeding, to keep from overburdening the currently established areas, and to expand the breeding range (Howell, *et al.*, 2014; Mueller 2020). Perhaps the wandering Limpkins are simply looking for areas that have their new favorite food source, the giant apple snail. A range map on the U.S. Geological Survey website (Benson 2022) shows the giant apple snail occurring from Florida to Texas and from Florida to South Carolina, with a disjunct population in Arizona. Except for the Arizona population and some populations in Texas, the snail is restricted to areas within roughly 100 miles of the coast. According to Florida Department of Agriculture and Consumer Services (FDOACS 2002), the snail does not inhabit regions where the temperature drops below 50° F in the winter months. Obviously, Limpkins are dispersing well beyond the current range of the apple snail. Whatever the reasons are that cause individual birds to disperse, the extreme distances that some individuals wind up travelling, such as the bird in Lewiston, indicate how risky for the individual such a strategy can be.

It is clear that Limpkins have been expanding out of Florida in recent years and that they are now breeding in new areas, areas that have an abundance of giant apple snails. The population of Limpkins at the northern extent of their new breeding range, in Texas, Louisiana, Georgia, and perhaps in Alabama and South Carolina as well, is growing rapidly. Exploring new areas to forage and breed may be a way for Limpkins to keep from overburdening the currently established areas, as well as to expand the breeding range.

Migrating birds are known to wander off course and overshooting is a frequent explanation for birds showing up further north in spring than they typically would. However, Limpkins are not considered to be migratory. In addition this was not just a spring phenomenon. As already noted, birds were discovered well north of range in every month from April to December in 2022. The Limpkin in Lewiston probably went too far, too late in the year, for its own well-being. It was rescued and transported to a warmer climate where it would seem to have a good chance to survive the winter. But even without the heroic efforts of the people who rescued this one individual, Limpkins appear to be thriving. We can speculate as to the cause of all these wayward Limpkins but it does not seem like a stretch to say that these extralimital sightings will continue into the near future, with additional records in New York seeming likely.

AGE OF THE LEWISTON LIMPKIN

Limpkin identification is relatively straightforward. No other species is very similar, although an immature White Ibis might be confused with them. The bill

on a White Ibis, however, is longer and much more strongly decurved, and the ibis lacks the obvious white markings in the brown plumage shown by a Limpkin. The many outstanding photos of the Lewiston Limpkin leave no question about the identification.

Ageing Limpkins is more difficult. Although Sibley (2014) depicts both an adult and a juvenile, the text provides no additional information. The adult is shown to have larger and more triangular white spotting on the upperparts than the juvenile. Birds of the World (Bryan 2020) states that “young birds can be distinguished from adults through the spring of their second calendar year by the white wing-markings that appear more streaked than the triangular markings of adults.” The Lewiston Limpkin had some triangular markings as well as streaks, and photos of known adult Limpkins show a mixture of triangular and streaked markings. Can we assume, therefore, that it was an adult?

Shaibal S. Mitra has extensive experience banding birds, which requires a thorough knowledge of ageing, so I asked him for his opinion. Mitra referred to Pyle (2008) and noted that the Lewiston bird showed uniform remiges (primaries, secondaries, and tertials), which indicates that these were all juvenile feathers and that the Limpkin, therefore, was hatched earlier in the year. I scrutinized some of the better photos and confirmed the uniformity of these feathers. If the Limpkin had been older, it would have at least two generations of remiges, with older feathers appearing paler and more worn than newer ones. The triangular markings in the plumage, which appear on the scapulars and median coverts, likely are due to the juvenal feathers in those tracts already being replaced.

ACKNOWLEDGMENTS

Frank Campbell deserves full credit for suspecting that the Limpkin was something unusual, obtaining a photo, and contacting Connie Adams of the NYSDEC. Connie promptly forwarded the photo to me, which allowed the identification to be confirmed and for many birders to enjoy this potential first state record. I would like to thank Patricia Lindsay for asking me to write about the Lewiston Limpkin for *The Kingbird*, as well as for her thorough review. Timothy Healy provided the very helpful link to first state records of Limpkin in 2021 and 2022, notified me of the explosion of records in Texas as well as the 2022 record in Minnesota, and provided other helpful comments. Shai Mitra evaluated the age of the Lewiston Limpkin and also made helpful review comments. Last but not least, the birding community owes a debt of gratitude to Karen Slote and the other wildlife rehabilitators whose time and effort resulted in the successful translocation of the Limpkin.

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