

ORNITHOLOGICAL 'MYSTERY' SONG
GIVEN BY MALE VIRGINIA RAIL

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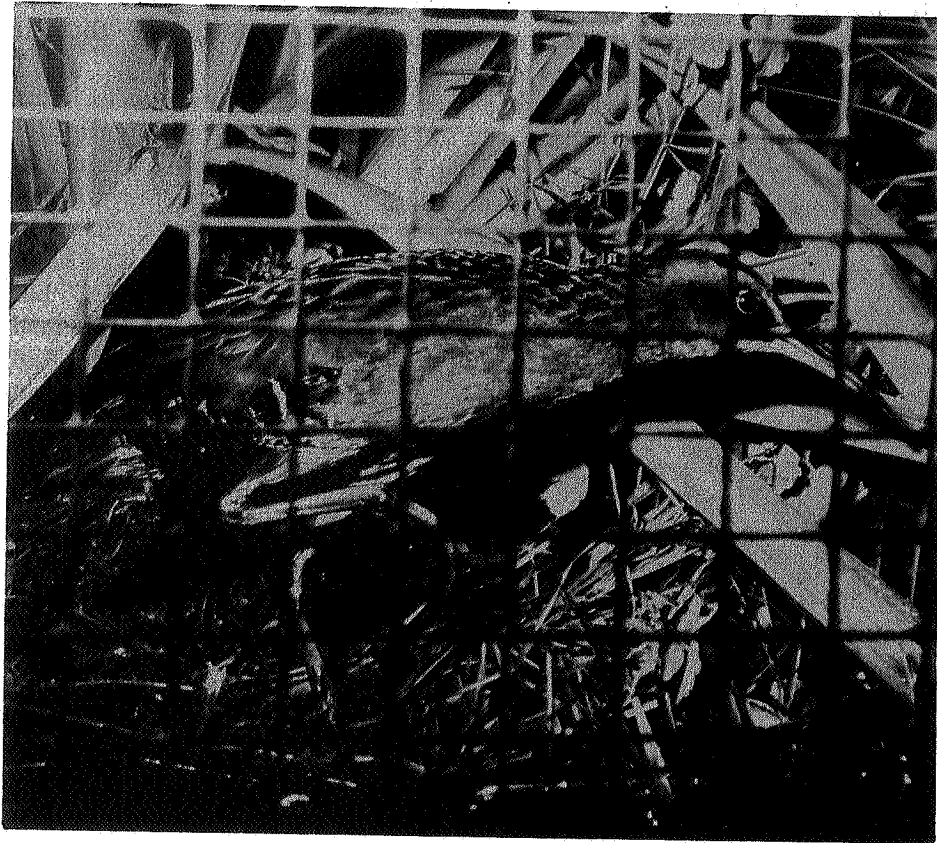
A nocturnal Rail-like song has had an aura of mystery about it since the days of its first description by Brewster (2) in 1901. The identity of the songster was unknown to him as well as to other ranking ornithologists of his day. The song was described as loud and persistent and was paraphrased: "kik-kik-kik, quèeah"; or "kik-kik-kik, ki-quèeah"; and "kic-kic, kic-kic, kic-kic, kic-kic, ki-quèeah." The bird was then known as the "kicker," and Brewster thought it was probably the Black Rail (*Laterallus jamaicensis*).

A sound recording of a song which closely fits this description is included in the Cornell bird song records (3) as a song of the Yellow Rail (*Coturnicops noveboracensis*), with the inference in the Western Guide that the identity of the song might need further investigations. The "kicker" song has thus become somewhat of a controversy over the years, and examples of the renewal of the controversy (1, 4, 5) show the continued interest in the mystery. The Black and Yellow Rails have been suggested most frequently as the "kicker," but more recently Joseph A. Hagar of Marshfield Hills, Massachusetts (personal correspondence), indicates near certainty that the bird is a Virginia Rail (*Rallus limicola*) from numerous personal experiences. However, he had not secured a specimen of a known singing bird or knowledge of the sex of the "kicker."

With this background, and with some experience in recording bird songs in the field, our interest in the mystery was heightened by an experience in 1966. Word came from Ryan Walden and John Quinn of the Philadelphia Academy of Natural Sciences that an unknown 'bird-like' song was heard in Bucks County, Pennsylvania, on 23 and 24 May. It was heard at night while they were collecting amphibians in a fresh water pond at Buckstone Farm, Taylorsville, near Washington Crossing.

To investigate the identity of the song, we went to the pond the evening of 25 May with boots, flashlights, and tape recorder. About 10 P.M., above a chorus of Bullfrogs, Greenfrogs, and Spring Peepers, we heard a clear, loud, ringing song which we could not, from field experience, identify. It was immediately recognized, however, as the 'kicker' song from hearing the song on the Cornell records. It was unlike songs we had heard previously from King (*Rallus elegans*), Sora (*Porzana carolina*), Black, or Virginia Rails, and we had had no experiences with singing Yellow Rails.

The bird was singing regularly and sound recordings were made using a Nagra IIIB tape recorder with an AKG Dyn 200 Studio microphone in a 32 inch parabolic reflector. The recording is on file in the Laboratory of Ornithology at Cornell University, Ithaca, New York, as *Rallus limicola* (Cornell Catalogue Cut No. 11).



The Mystery Rail after its capture

Photo by Stephen T. Harty

After listening to its song, and attempting unsuccessfully to see the bird in flashlight beams, we played its tape recorded song through the playback speaker of the tape recorder. The bird immediately responded by quickening its speed of singing. We waded into the shallow water and positioned ourselves on opposite sides of the source of the sound which was some 40 feet away, but we again failed to see a bird. Singing continued and was in progress when we left about midnight. Mr. Walden heard the song again the night of 26 May but not thereafter at Buckstone. It had been present for four successive nights, 23 through 26 May, 1966.

We had scheduled a trip to investigate singing Black Rails for the next evening, 27 May, 1966, and went to a salt marsh at Sayre's Neck in Cumberland County, New Jersey. This is along the Delaware River southwest of Bridgeton. At 10:30 P.M., instead of the song of the Black Rail which we had heard there in 1965, we heard another persistently singing "kicker." The bird was at a considerable distance, but a brief tape recording was made.

We were unable to surround or see the bird, as it retreated at each of our approaches. Its song, identical in general pattern with the one at Buckstone, stopped at 11 P.M. It did not resume during our remaining stay until after midnight. The earlier persistent singing, and now silence, led us to believe it may have left this area, perhaps on migration. It was recalled that Mr. Chandler Robbins was quoted (4) as having heard the "kicker" song in a salt marsh area where Black Rails sang in Maryland.

Even with these two fresh experiences, the song was still a mystery to us. As the season advanced without additional experiences with the song, we resolved to make frequent nocturnal "listening" trips to numerous fresh or brackish ponds and marshes in 1967.

A fresh water marsh in Mt. Laurel Township, Burlington County, New Jersey, is known as the Hartford or Cody's marsh. We regularly visit this marsh, particularly to hear Spring songs and calls of the King, Sora, and Virginia Rails in April and May. About 9:30 P.M. on 22 May, 1967, it was an unexpected surprise to hear the song of the "kicker" at this marsh. Several other members of the Delaware Valley Ornithological Club, Robert L. Haines, Joseph A. Jacobs, and William R. Middleton, were called in to determine their experience with this song. None had heard it before or could positively identify it, but they agreed it had a 'Rail-like' quality. Certainly the song was that of the "ornithological mystery" bird.

We now had the opportunity to study again the singing bird in a convenient, nearby location and possibly see it or perhaps capture one for sure identification. The first attempt was made as Harty entered the marsh about 9:30 P.M. the evening of 23 May. Wading to the singing area, he found the song coming from a thick growth of Water Smartweed (*Polygonum punctatum*) with scattered shrubs of Swamp Rose Mallow (*Hibiscus Moscheutos*). Throughout several of his approaches from different sides of the singing spot, the bird continued its song, except briefly when he came closer than 10 or 12

feet from the sound. The bird stayed in exactly the same spot, as far as he could tell, but was not visible in the flashlight beam, being well hidden in the vegetation. A brief glimpse was had when the bird eventually moved and flushed across one of the recently tramped trails. Identification was not made, but it appeared to be a small rail.

The next evening, 24 May at about 9:30 P.M., we both renewed the search and located the songster in another nearby patch of Water Smartweed. We erected a mist net beside the patch. At one time we were within about 10 feet from the point of singing, but the sound soon moved to the other side of the net, the bird having gone under the net.

Unsuccessful with only one or two people, we elicited the aid of Joseph A. Jacobs and Frederick Homer for another aquatic hunt. Entering Cody Marsh on 26 May at 10 P.M., we four were equipped with wading boots, flashlights, poles, mist net, and a small draw string bag as the "kicker" sang loud and clear. Easily located, the bird was again in a nearby dense growth of Smartweed which extended a foot or two above the water level. The water was from 2 to 4 or more feet in depth, making activities more difficult. In the center of this area, about 30 feet in diameter, was our objective, located by the intersections of our flashlight beams aimed at the song.

On one side of the area we tramped down an arc of the vegetation to water level, then erected the poles and mist net along this arc. In order to prevent escape under the net, its lowest trammel was secured under water along its entire 40-foot length. Singing continued, although sporadically, during these activities. With the net in place, we then positioned ourselves to encircle the bird.

The night was calm and as we lighted the surface of the "kicker's" lair, any motion it made would be detected and pinpointed from the wiggling leaves.

At 11:30 P.M., with all in readiness from our standpoint, the singing ceased. For several minutes there was neither sound nor motion. Conjecture increased that the bird had given up the slip. Then, in the center of the ringed arena, the leaves moved, first away from and then with a 'trail of quickening motion' toward the net. We all moved or floundered forward in pursuit, when suddenly, out came a bird. It nearly escaped around the end of the net during our rather frantic, splashing endeavors. Finally, Harty got it in hand and "in the bag" — an adult VIRGINIA RAIL!

The chase was over, the Black and the Yellow Rails lost out, and Mr. Hagar's studies and conclusions were confirmed.

For study, possible banding, and release, the bird was kept in a cage with marsh vegetation for several weeks. It soon took food and water but did not give its "kicker" song as hoped. In July, following an injury, it died, and on 3 August, 1967, Frederick A. Ulmer of the Philadelphia Zoological Gardens determined from gonadal inspection that the bird was a male.

COMMENTS ON THE "KICKER" SONG OF THE VIRGINIA RAIL

In view of the importance of song in the present account, additional descriptive notes are presented. The most striking features are: first, it is very loud, clear, and emphatic; second, it is persistent; and third, it always has the same pattern or structure — a series of "kiks" followed by a terminal "ki-quèeah" or "quèeah." The ending has also been described (4) as "McGreer" and the song, "tic-tic-tic-McGreer." In all songs, there has been marked emphasis on the penultimate syllable.

The original lucid description of the song by Brewster (2) in 1901 so nearly fits the songs we heard in 1966 and 1967 that it is almost uncanny, and there is no doubt we have listened to the same species.

Although the song pattern was almost stereotyped, variation was present in three features: first, in the number of "kiks" in a song; second, the grouping of "kiks" and short pauses within the song; and third, in the cadence of singing or speed of delivery of songs over a period of time. At Buckstone, songs were given about every 6 seconds for part of the time, later at about 8 seconds, and another series at 11-second intervals. Following play-back of the bird's own song by tape recorder, it immediately responded by singing with great excitement every 2 or 3 seconds!

The number of "kiks" within an individual song ranged from 5 to 9 at Buckstone, 6 to 12 in the few songs recorded at Sayre's Neck, and 5 or 6 at Hartford ranging down to very short songs with only two or three "kiks." Variation also was present, as with Brewster's birds, in grouping of the "kiks" within the songs; examples are "kik-kik-kik, kik-kik, ki-quèeah," or another, "kik-kik, kik-kik, ki-quèeah," or with longer groupings, "kik-kik-kik-kik, kik-kik, quèeah."

The mystery song has now been traced to its source. It apparently has rarely been heard over the years, and this to us is as mysterious as the original question of "Who did it?" The Virginia Rail is not a rare bird. If it is true that the bird sings this song only rarely, perhaps only for a few days during the annual cycle or perhaps only during and shortly after migration in the spring, this would help explain its infrequent occurrence.

A second factor may be the comparatively small fraction of "bird watching" time or, in fact, professional ornithological activity which takes place after 9 P.M. when mosquitoes, amphibians, owls, and rails are active. It is possible, with this new alert and new information, more "kicker" songs will be heard in familiar places.

Unanswered are many questions: what is the principal purpose of the song; do both male and female birds give the song; is it possibly effective in announcing the presence of the rail to migrants flying overhead; and, is it a mating call while the familiar "ticket" call is more of a disturbance note? We don't know.

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