

**RED-EYED VIREO (*Vireo olivaceus*) PLUNGES INTO  
POND IN APPARENT FORAGING MANEUVER**

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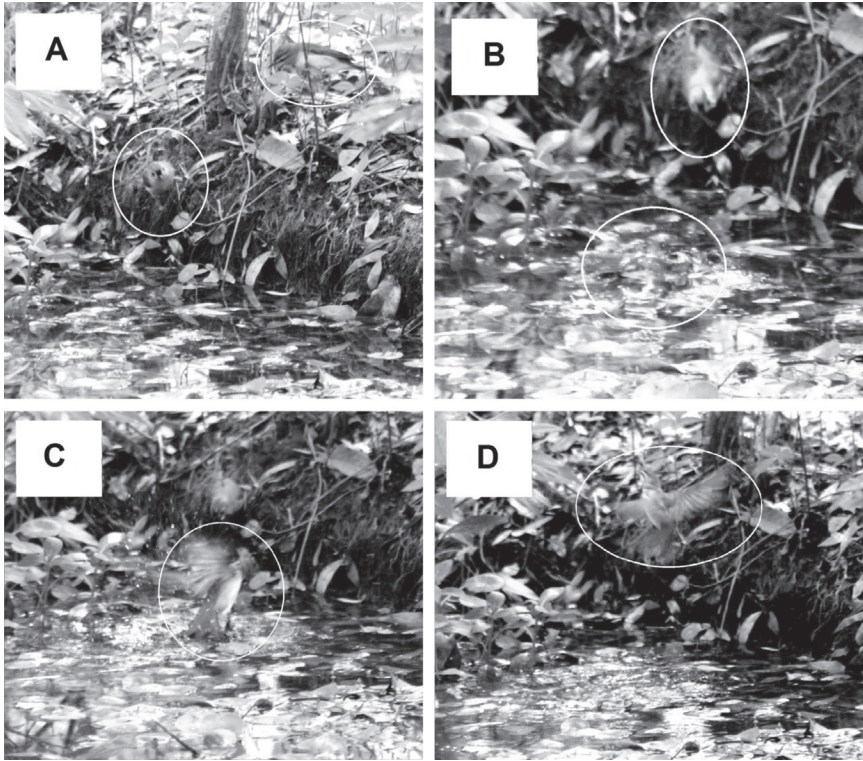
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On 30 April 2017, KFT visited the Brooker Creek Preserve & Environmental Education Center, Tarpon Springs, Pinellas County, Florida. There is a small woodland pond and a walkway between two of the nature center buildings. At 12:30pm four Tufted Titmice (*Baeolophus bicolor*) were flying near and along the pond edge and landed in some low brush on the pond bank. KFT focused a Canon EOS Rebel T5 digital camera with a 300 mm lens on a titmouse perched low on the pond bank. As he watched through the viewfinder a Red-eyed Vireo flew into the camera's field of view and perched low on a small branch. As KFT took photographs it peered intently at the pond, dove head first into the water (Fig. 1A) and completely submerged (Fig. 1B). It then appeared at the surface (Fig. 1C) and flew away (Fig. 1D). This small pond had numerous whirligig beetles (Gyrinidae) of unknown species on its surface. The assumption is that the Red-eyed Vireo and the Tufted Titmice were attracted to the pond by this prey opportunity. After the Red-eyed Vireo flew off, two Tufted Titmice settled on a perch beside the spot where the vireo dove into the water. A titmouse was leaning from a perch on the bank watching the activity (Fig. 1A, B, C). The titmice did not try to capture the beetles while under observation. Although it was assumed that the Red-eyed Vireo was diving for prey, the photographs do not confirm that any prey was captured by the bird.

A similar observation of a Red-eyed Vireo diving into a woodland brook was reported by Arthur B. Williams on 16 July 1934, in Ohio (Williams 1940). Apart from his vireo repeatedly diving several times into the water, his description of the diving vireo in Ohio is very similar to observations reported here. He wrote, "The bird would work down a small branch overhanging the pool until it was about eight inches [20 cm] above the water. Here attention was fixed at a certain spot in the water below, and shortly the bird would dive in head first as a kingfisher does." Williams (1940) reported watching the vireo he observed eating something apparently captured from the water. Evidently the vireo in Ohio nearly submerged during one of its dives, implying that in the other instances, it remained mostly at the surface. Instead, one of KFT's photographs (Fig. 1B) shows that the bird was entirely submerged from the momentum of the plunge.

A recent life history review of the Red-eyed Vireo (Cimprich et al. 1996) mentioned Williams' report and treated it as an "apparent" case of diving into water after prey. As noted, the individual in Ohio was observed eating items after diving. Thus, we assume that potential prey was the stimulus that elicited the behavior in both cases; if not, then the behavior represents equally unusual bathing behavior in the species. The behavior better fits foraging in Red-eyed Vireos (see below) than species-typical bathing. The behavior of these two individual vireos resemble a form of plunge-diving that is practiced routinely during foraging by some kingfishers (Alcedinidae). What is surprising is that the behavior occurred at all. The titmice in the present case appeared to be intently interested in the insect activity on the surface of the pool, but they did nothing to take



**Figure 1.** Red-eyed Vireo (*Vireo olivaceus*) at Brooker Creek Preserve, 30 April 2017. (A) The vireo lands on a twig and watches the pond along with a Tufted Titmouse (*Baeolophus bicolor*) on the bank. (B) The vireo has plunged into pond with a titmouse intently watching and leaning down from its perch. The swirl in the photograph indicates where it is completely submerged. (C) The vireo emerges from the pond. (D) The vireo flies away.

advantage of the opportunity. Evidently, the vireo arrived after a titmouse was already watching the pool at the same site, and reacting to an apparent foraging opportunity, plunged directly into the water from a pool-side perch (Fig. 1).

Red-eyed Vireos chiefly are foliage-searching insectivores that specialize on seeking food in a distinct arboreal, structural compartment, the outer small branch/foilage zone of broad-leaved dominated forests of eastern and north-central North America (James 1976, Holmes et al. 1979, Cimprich et al. 2000). They commonly forage in mid- to upper levels of canopy tree crowns in a forest, but they also come down into the subcanopy and understory layers less frequently where similar food resources are exploited in smaller broad-leaved, woody species (James 1976, Robinson 1981, Cimprich et al. 2000). Low foraging of this sort is especially notable at forest edges and internal canopy breaks formed by tree-fall gaps, stream or pool margins, and margins of logging road corridors (JSG, unpubl. data, northern Maine). This vireo is noteworthy among most foliage insectivores in its distributional range in that it often practices sally-hover maneuvers to capture stationary prey on foliage that lies beyond reach (Robinson and Holmes 1982). Sally-hover maneuvers, as an aerial tactic to access and capture prey, predominate in this species, and in Philadelphia Vireos (*V. philadelphicus*), in northern forests where

they breed (Holmes et al. 1979, Robinson and Holmes 1982; JSG pers. obs.). As variable-distance searchers, Red-eyed Vireos commonly sally to foliage 1 m or less away from a perch, but less frequently up to about 2 m (Robinson and Holmes 1982). We suggest the sallying food-capture maneuvers that Red-eyed Vireos commonly practice, coupled with an absence of fear about entering water (perhaps due to bathing experience), may explain the seemingly odd aquatic plunging behavior as an opportunistic foraging tactic initiated by an individual bird. The sallying maneuver is species-typical, and perhaps quite old in an evolutionary sense in the genus; only the aquatic substrate at which the behavior was directed is surprisingly unusual. The titmice, which sally-hover only occasionally (JSG pers. obs.), merely behaved as watchers.

## LITERATURE CITED

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