

Video Evidence of a Red-eared Slider (*Trachemys scripta elegans*) Preying Upon a Live Mallard (*Anas platyrhynchos*) Duckling in Louisiana

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Abstract - Most animal matter in the diet of the omnivorous *Trachemys scripta* (Pond Slider) consists of invertebrate prey items such as insects, crustaceans, and mollusks, but often also includes fish and amphibians. Reptiles, birds, and mammals are less commonly reported, and even when found, it is usually unknown if they were captured alive, as Pond Sliders will certainly scavenge dead animals. Though it is well known that *Chelydra serpentina* (Snapping Turtle) will prey upon waterfowl from the water surface, reports of such encounters are seemingly rare in Pond Sliders. Here, we document with video evidence an adult female *T. s. elegans* (Red-eared Slider) emerging from the water to successfully take and drown an *Anas platyrhynchos* (Mallard) duckling.

Trachemys scripta (Thunberg in Schoepff) (Pond Slider) are native to the southeastern and central US and northern Mexico (Powell et al. 2016). However, chiefly through the international pet trade, this species is now one of the most widely distributed species outside of its native range, introduced to over 70 countries and all continents except Antarctica (TTWG 2021). Being a widespread and often abundant species, many aspects of Pond Slider behavior, developmental biology, ecology, morphology and function, phylogenetics and evolution, physiology, and reproduction have been investigated (Seidel and Ernst 2006).

The diet of Pond Sliders has been investigated both in their native (e.g., Cagle 1950, Dreslik 1999, Hart 1983, Stephens and Ryan 2019) and introduced (e.g., Chen and Lue 1998, Lee and Park 2010, Outerbridge 2008, Works and Olson 2018, Zhang et al. 2020) ranges. They are typically referred to as opportunistic omnivores (Ernst et al. 1994, Parmenter and Avery 1990). It is often reported that this species undergoes an ontogenetic shift from a primarily carnivorous diet as juveniles to a primarily herbivorous diet as adults (Clark and Gibbons 1969, Hart 1983). The most frequently cited explanation for this dietary shift concerns energetic constraints, namely that large adults with low metabolic rates tend to be poor active predators (Bouchard and Bjorndal 2006, Hart 1983). Juveniles have higher metabolic needs, are better active predators, and need the calcium-rich animal foods they prey upon for rapid growth and maturation (Bouchard and Bjorndal 2006, Hart 1983). However, variation from this ontogenetic dietary shift, with adults consuming more animal matter, does exist in some populations both in their native (Dreslik 1999) and introduced (Chen and Lue 1998, Pérez-Santigosa et al. 2011, Zhang et al. 2020) ranges. This dietary plasticity is among the reasons why this highly adaptable and ecologically tolerant species can thrive all over the world outside of its native range.

Most vertebrate prey items reported in Pond Slider diet studies comprise fish or amphibians (e.g., Cahn 1937, Parmenter 1980, Works and Olson 2018), but some studies report reptiles (e.g., Minyard 1947, Outerbridge 2008) and birds (e.g., Outerbridge 2008, Pérez-Santigosa et al. 2011, Pierce 1992, Zhang et al. 2020). Whether these prey items were taken alive or scavenged after death is unknown, but it is often assumed to be the latter. There

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are few published reports of wild Pond Sliders taking live vertebrate prey, and even fewer that document predation on live birds. In Oklahoma, Ligon (2007) reported a *Trachemys scripta elegans* (Wied-Neuwied) (Red-eared Slider) attacking and pulling under the water an exhausted male *Agelaius phoeniceus* (L.) (Red-winged Blackbird) after antagonistic encounters with other male birds. Salerno and van den Burg (2021) reported predation of an *Anas platyrhynchos* L. (Mallard) duckling by an adult female Pond Slider in Spain, where the species is invasive. Pritchard and Trebbau (1984) describe reports from ranchers in Venezuela of the closely related *Trachemys callirostris* (Gray) (Colombian Slider) frequently taking waterfowl by their feet, drowning, and eating them.

In the early evening of 14 April 2023, with clear skies and an air temp of 25 °C, A. Landry and G. Mandill took a short walk around an elongate retention pond (0.10 ha) adjacent to a condominium complex in Mandeville, LA. They paused to observe 10 recently hatched Mallard ducklings, a Mallard hen (presumably the mother), and 4 Mallard drakes. A. Landry began video-recording at 17:17 when the 4 drakes forced copulation on the hen. The ducklings remained grouped up and close to the hen. A. Landry captured 2 short videos (12 s and 15 s) of this behavior. The drakes left the area shortly after the completion of the forced copulation.

A. Landry recorded a third video at 17:22 that shows an adult female Red-eared Slider in the shallow water, with its shell mostly exposed, cautiously approaching a duckling from behind (Fig. 1). The duckling appears to give little indication or notice of the turtle. Moments later, at the 9-s mark of the video, the Red-eared Slider quickly grabs the tail of the duckling in its mouth and drags it underneath the water. The hen attempts to intervene to no avail by stomping on the carapace of the turtle as it takes the duckling underwater. The duckling was not seen again, and we assumed it was killed and eaten by the Red-eared Slider. A fourth video taken at 17:24 shows the hen stationary on the edge of the pond, surrounded by her remaining ducklings. A smaller Red-eared Slider, a different individual from



Figure 1. A still image taken from a video of an adult female *Trachemys scripta elegans* (Red-eared Slider) milliseconds before a successful strike and subsequent drowning of a duckling *Anas platyrhynchos* (Mallard) on 14 April 2023, in a small suburban retention pond in Mandeville, LA.

the predation video, can be seen floating nearby on the surface, along with a Mallard drake. Over the next few weeks, the number of ducklings continued to drop, with only 4 remaining at last observation. Though we cannot be certain that turtles had any part in the fate of the additional 5 missing ducklings, as ducklings can fall prey to many things, it is certainly plausible given the present observation.

It is well known that *Chelydra serpentina* (L.) (Snapping Turtle) lurking below the surface will snatch and drown waterfowl (e.g., Abel 1992, Coulter 1957, Pryor 1996). Our video is undeniable evidence that adult Pond Sliders, though often reported as mostly herbivorous as adults, will also opportunistically attack live ducklings. Other credible anecdotal reports and even other videos of Pond Sliders taking ducklings can be found on social media and other sources on the Internet. Like the current observation, in all instances we found online where Pond Sliders preying upon ducklings can be known or inferred, the attacks happened in urban or suburban man-made ponds. This association may be simply because there are more people with smart phones around these populated areas to record such interactions, and perhaps these attacks happen in more natural settings with similar frequency. Alternatively, perhaps these attacks by Pond Sliders happen more often in urban and suburban man-made ponds. Limited plant resources in these habitats, and perhaps limited resources in general, may necessitate these opportunistic predatory events, especially for females in the egg-laying season like the current observation. Perhaps Mallard ducklings are easier prey targets in these man-made habitats compared to more natural settings because of differences in maternal protection. More research could help to better understand how common this predatory behavior in Pond Sliders is in both man-made and wild places, and what circumstances may help predict when they will prey upon naïve young waterfowl.

The 4 videos were deposited in the Florida Museum of Natural History Herpetology Collection (UF 195098), but are also made available here (see Supplemental File 1, available online at <http://www.eaglehill.us/SENAonline/suppl-files/s23-4-S2931-Glorioso-s1>, and for BioOne subscribers, at <https://www.doi.org/10.1656/S2931.s1>).

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