



A Third Documented Case of Courtship between a European Pond Turtle (*Emys orbicularis*) and an Allochthonous Red-eared Slider (*Trachemys scripta elegans*) (Testudines: Emydidae)

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The European Pond Turtle (*Emys orbicularis*) is distributed from northern Africa through southern, central, and eastern Europe to western Asia (Fritz 2001; Rogner 2009). In Italy this species is found mainly in coastal areas and internal plains, although in several regions little or only partial data address its presence (Zuffi 2000; Sindaco et al. 2006; Di Tizio et al. 2008). Its conservation has been compromised by factors including the reclamation of marshy areas and other alterations to its habitats (Gariboldi and Zuffi 1994; Lebboroni and Chelazzi 1999). A further anthropic change was the introduction of alien species, mainly species in the genus *Trachemys* (Cadi and Joly 2004; Stănescu et al. 2017).

On 24 February 2024, I encountered an adult male *Emys orbicularis* in an artificial pond about 700 m north of the Vomano River and 3 km from its mouth in the Province of Teramo in Abruzzo, Italy (42.64944, 14.00000). The pond

in question is in a delimited area, which has a containment function for allochthonous turtles. The male very likely was introduced into the pond by private individuals who probably, following its capture, decided to release it in a site hosting other turtles. The person (or persons) responsible for this introduction almost certainly ignored the identity of the turtle, the conservation status of Italian populations (Luiselli et al. 1997), and applicable regulations. Consequently, no information on the origin of this specimen and its genetics is available.

At the time of the encounter (12:30), I observed that the male in question was intent on courting a female Red-eared Slider (*Trachemys scripta elegans*) with which it shared the artificial habitat. The male was the only individual of its species, whereas I counted ten Pondsliders (*Trachemys scripta*) (mainly *T. s. elegans*). Courtship lasted the entire period (~20 min) during which the two turtles were visible. The male remained



Figure 1. Phases of interspecific courtship between a male European Pond Turtle (*Emys orbicularis*) and a female Red-eared Slider (*Trachemys scripta elegans*) in Abruzzo, Italy: The male *E. orbicularis* pushing its chin against the head of the female *T. s. elegans* (left) and keeping its chin in front of the rostrum of the female (right). Photographs by Alessandro Paterna.

firmly anchored to the anterior portion of the female's carapace, with its head directed toward that of the female, which was moving along the bottom of the pond (Fig. 1). By fully extending his neck, the male kept his chin pressed against the top of the female's head or in front of her rostrum.

Both turtles were adults, but differed substantially in size (the male's carapace only about $\frac{3}{4}$ as long as that of the female). The female showed no signs of annoyance, and although the male constantly pressed his chin on the back of her head, she did not retract her neck and head; on the contrary, she continued to keep her neck extended. The "submission" of the non-native female is of interest, as the two species employ different courtship rituals (Fritz 1999). For example, only a short distance from the interspecific couple, a male Yellow-bellied Slider (*T. s. scripta*) was courting a female *T. s. elegans* by positioning himself in front of the female and rapidly vibrating his foreclaws. Also, the time of year was somewhat earlier than that during which local *Emys orbicularis* populations engage in courtship (Di Tizio et al. 2008), as well as those in warmer localities (Ayaz et al. 2017).

Although interactions between *Emys orbicularis* and allochthonous turtles are widely documented (Cadi and Joly 2003, 2004; Macchi et al. 2008; Kleewein 2015), to the best of my knowledge, courtship has been documented in the literature on only two occasions, the first in the Natural Park of the Dune Complex of Corrubedo and Lagoas de Carregal and Vixán (Ayres and Del Pozo 2006) and the second in a Danube oxbow in western Slovakia, where the two species are regularly observed (Jablonski et al. 2017). In this case, because courtship occurred in a very small pond in which many Pondsliders were present, determining how the behavior of both turtles might have been affected was impossible. However, this observation is an additional confirmation of male *Emys orbicularis* responding to chemical and biometric stimuli of female *Trachemys scripta*.

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