

## Biodiversity Record: First record of in-situ hatching of red-eared sliders in equatorial Southeast Asia

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**Subjects:** Red-eared slider, *Trachemys scripta elegans* (Reptilia: Testudines: Emydidae).

**Subjects identified by:** Evelyn Chong.

**Location, date and time:** Singapore Island, Seletar Park Connector along Lower Seletar Reservoir (1.415371°N, 103.859478°E); 14 July 2021; around 1000 hrs.

**Habitat:** Urban parkland, about 40 m away from an artificial freshwater lake.

**Observers:** Evelyn Chong and park maintenance workers.

**Observation:** A total of eleven turtle hatchlings, each around 4 cm in carapace length, were excavated by park maintenance workers at the base of a *Khaya senegalensis* tree along the park connector (Fig. 1). The hatchlings were found in the earth about 5 to 10 cm beneath the surface (Figs. 2 & 3) along with fragments of egg shell (Fig. 4).

**Remarks:** To our knowledge, this appears to be the first in-situ hatching of red-eared sliders recorded in Singapore, and possibly in the equatorial tropics, at least within Southeast Asia. An earlier local incidence of hatching in 2014 is considered ex-situ as it had occurred within the garden of a walled private residence (Leong & Lim, 2014). A red-eared slider found wandering in the neighborhood in April that year was kept alone in the garden. She was observed excavating a hole in the ground and laying eggs sometime in June. Sixteen hatchlings were emerged from the ground in the garden on 19 November (Leong & Lim, 2014). Despite the nesting and hatching having occurred under captive conditions, the climate and environment were not artificially controlled, and would not have been different had it occurred in the wild. The red-eared slider, which is native to temperate regions of south-central North America (Powell et al., 2016), was introduced to Singapore possibly as early as the 1960s, but while mating and nesting of feral individuals have been observed, no hatching of eggs in the wild have been recorded (Ng & Lim, 2010). With the present report of in-situ hatching, we confirm that the red-eared slider can successfully complete its life cycle in Singapore's equatorial climate.

According to the Animal & Veterinary Service (2020), the red-eared slider is one of only two reptile species that is legally sold as pets in Singapore. It is the most frequently observed turtle in Singapore (Ramsay et al., 2007), which, given the lack of previous recorded sightings of red-eared slider hatchlings in the wild, has been attributed mainly to high propagule pressure from many captive individuals being released consistently into canals, ponds and reservoirs (Ng & Lim, 2010). This has raised doubts about the actual establishment/ability to establish of the red-eared slider in the equatorial tropical climate of Singapore. The present evidence of successful in-situ hatching means it certainly is possible that some observed juveniles might be wild-hatched. Until detailed studies are conducted to ascertain that the feral population of red-eared sliders island-wide is indeed self-sustaining and not fueled by abandoned animals, it would be premature to declare that the species is firmly established there.

**Note:** We thank Norzehan Ahmad, Hafiz Kamisan and Siew Lan Poh-Lim for sharing their observations, and Kelvin Lim for his help and input on this record.

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Fig. 1. Maintenance workers digging at the site where the hatchlings were found. Fig. 2. Red-eared slider hatchlings excavated out of the earth. Fig. 3. All 11 hatchlings assembled on a plastic sheet. Fig. 4. Fragment of egg shell found on exposed earth. (Photographs by: Evelyn Chong)