FIG. 1. Close-up views of punctures in six depredated *Gopherus agassizii* eggs found in a nest on a rocky hillside of the Cottonwood Mountains, southern Joshua Tree National Park.

depredated very recently. There were no discernable mammal or bird tracks spotted near the nest site nor were any animal droppings found, thus the identity of the predator is unknown.

We strongly suspect the depredated nest belonged to a large female tortoise we equipped with a radio transmitter and who was known to inhabit the immediate vicinity. On 20 April 2016, she was located near the nest site and had a clutch of six eggs visible on her X-radiograph. On 3 May 2016, the date the depredated nest was discovered, she had no eggs visible on her X-radiograph indicating she had oviposited her clutch of six eggs. Additionally, the egg sizes from the nest were similar to those measured on her previous X-radiograph after correcting for magnification error (Graham and Petokas 1989. Herpetol. Rev. 20:46–47). This is the largest clutch found at our study site since 2015, produced by one of the largest females. Additionally, all six eggs were the largest eggs X-radiographed at the site and were oviposited early in the season relative to the other females. Our finding seems to be in accordance with a study in California showing larger females not only lay larger eggs, but also tend to lay larger clutches earlier in the year (Wallis et al. 1999. J. Herpetol. 33:394–408).

Unfortunately, there is evidence that larger clutches are more likely to be depredated. It has been suggested that this is due to increased metabolic activity and odors released during oviposition. Alternatively, larger clutches may be more difficult to deposit without damaging the eggs and causing breakage, which may also attract predators (Bjurlin and Bissonette 2004. J. Herpetol. 38:527–535). This particular nest may have been unsuccessful due to its shallow depth, also making it more susceptible to predators (Burge, unpubl. data in Hampton 1981. *In* K. A. Hashagen [ed.], Proceedings of the 1981 Symposium of the Desert Tortoise Council, pp. 128–138. Desert Tortoise Council, Inc., Long Beach, California).

The eggshells were relatively intact and the holes appeared to be punctured rather precisely, suggesting a bird may have pecked them open. Ravens (*Corvus corax*) are common predators of juvenile tortoises and have been spotted occasionally at our study site. They are not known to be predators of tortoise eggs, but are nest predators of other birds. Additionally, they are well recognized as opportunistic feeders, scavenging for food wherever it can be found. It is not unreasonable to propose that tortoise eggs would be a desirable Raven food choice. Ravens are able to consume an egg whole or pierce it and suck out the contents inside (Nelson 1934. Condor 36:10–15), the latter being similar to our predation event. However, unlike our finding, Ravens are reported to carry eggs away from the nesting area and back to their own nests for feasting (Stiehl 1991. Wilson Bull. 103:83–92; Gaston et al. 1996. Ibis 138:742–748). *Geococcyx californianus* (Roadrunners) could be another avian species posing a potential threat to tortoise eggs in Joshua Tree National Park. Although it is unlikely the clutch was destroyed by a large mammal that might crush eggs during consumption, we could not rule out the possibility that a smaller mammal, for instance *Bassariscus astutus* (Ringtailed Cats), *Spilogale gracilis* (Spotted Skunks), or rodents could have punctured the eggs.

Due to the shortage of literature on tortoise egg predation and little available evidence left at the nest site, it was impossible for us to determine the identity of the predator with certainty. To the best of our knowledge, this is the first published report of a tortoise nest (depredated or otherwise) in Joshua Tree National Park as well as the first published finding of a *G. agassizii* nest on rocky, mountainous slopes (Berry et al. 2016. U.S. Geological Survey Open File Report 2016–1023). Our observation is particularly noteworthy since *G. agassizii* is not commonly reported in the literature to utilize rocky hillsides.

Our research was supported by the California Department of Fish and Wildlife through a grant to the Coachella Valley Conservation Commission and by Joshua Tree National Park. Research was conducted under permits from the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife, and Joshua Tree National Park. We are grateful to the Institutional Animal Care and Use Committee of Northern Arizona University for reviewing and approving our research procedures. Any use of trade, product or firm names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

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GOPHERUS POLYPHEMUS **(Gopher Tortoise). PREDATION.** On 19 June 2015 at 1111 h, as we were leaving our study site at the John F. Kennedy Space Center (KSC), Florida, USA, we stopped to photograph a male *Alligator mississippiensis* (American Alligator), approximately 3 m total body length, observed along a two-lane road near the Atlantic Ocean (28.61771°N, 80.60455°W; WGS

84). On approach, we noticed a *Gopherus polyphemus* (Gopher Tortoise) alive, alert, and held in the mouth of the alligator (Fig. 1). As we watched from an appropriate distance to not disturb the event, the alligator moved into a nearby small body of water. After a few minutes, the tortoise began thrashing its forelimbs in an attempt to escape. In response, the alligator attempted to drown the tortoise by placing its head under the water; however, the neck of the tortoise was long enough to reach out of the water and obtain air. After approximately 30 minutes, we heard a loud popping sound as the alligator attempted to crush the shell of the tortoise. We observed this interaction for a total of 90 minutes, with little change other than occasional popping of the shell. At this point we vacated the area. On the following day, 20 June 2015, we returned to the event's location to look for pieces of the tortoise's shell, but the alligator remained in the body of water, preventing a thorough search of the area. The tortoise was not seen in or near the water, so we assumed that the alligator succeeded in killing and consuming the tortoise, but due to lack of observable evidence it is also possible that the tortoise might have escaped.

In addition to this observation, there have been three other recent incidents involving radio-tagged tortoises at KSC that we speculate to be of a similar nature. In each of these events, after tracking to the location of each tortoise, we found fragments of the tortoise's carapace and a detached transmitter near or in bodies of water. The first event occurred with a male tortoise on 28 August 2014, the second with a male on the same day as previously described event (19 June 2015), and the third with a female on 30 July 2015. Each of these events occurred within a 0.75-km radius of the previously described observation in coastal strand habitat. Although we did not directly observe predation in any of these events, we speculate that each was due to predation by *A. missippiensis* and the distances suggest that multiple alligators were involved. During the second and third events, Brevard Co., Florida was classified as abnormally dry (D0; United States Drought Monitor) due to the lack of regular rainfall and high temperatures. We hypothesize that due to the reduction of aquatic habitat during this drought, *A. mississippiensis* may have more often fed on *G. polyphemus* due to ease of capture. Current estimates of adult survivorship of *G. polyphemus* often assume annual adult survival in excess of 95%, but we suggest that in areas with large *A. missippiensis* populations adult mortality may be higher.

FIG. 1. *Alligator mississippiensis* with *Gopherus polyphemus* in its mouth, Florida, USA.

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***HYDROMEDUSA MAXIMILIANI* (Tartaruga pescoço-de-serpente; Maximilian's Snake-necked Turtle). PARASITISM.** *Hydromedusa maximiliani* is an endemic freshwater turtle from mountainous areas of the Brazilian Atlantic forest, where it inhabits sandy and rocky-bottomed streams (Souza and Abe 1998. J. Herpetol. 32:106–112). *H. maximiliani* is considered "vulnerable" by the IUCN. During a herpetological field trip on 5 September 2015 at Reserva Biológica Augusto Ruschi, Santa Teresa, Espírito Santo, southeastern Brazil (19. 918808°S, 40.552046°W, WGS84; 650 m elev.), we found one adult *H. maximiliani* submerged in a permanent stream. The individual had parts of its limbs, tail, and plastron covered by leeches of the order Rhynchobdellida (Fig. 1A–C). These leeches are common in area streams. The parasitized turtle appeared to be slimmer than non-parasitized individuals we observed, but was mobile and its swimming ability did not appear to be affected. The large number of parasites found on this *H. maximiliani* may be explained by the low vagility characteristic of this species, even in the reproductive season (September–January). In addition, parasitic infestation may be more frequent when a population is reduced or isolated from other populations due to habitat fragmentation (Souza and Abe 1997. Bol. Asoc. Herpetol. Esp. 8:17–20). This appears to be the first record of leech parasitism in *H. maximiliani.*

We thank ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade) for the permit issued for field studies (n°44807-1). E. C. Campinhos and A. T. Mônico thank Fundação de Amparo a Pesquisa do Espírito Santo (FAPES) and Coordenação de Aperfeiçoamento Pessoal de Nível Superior (CAPES), respectively, for the postgraduate scholarship. R. B. G. Clemente-Carvalho is grateful to the Universidade Vila Velha (UVV 44/2014) and Fundação de Amparo a Pesquisa do Espírito Santo (FAPES 0611/2015), which sponsored the research of the Laboratório de Ecologia de Anfíbios e Répteis (LEAR).

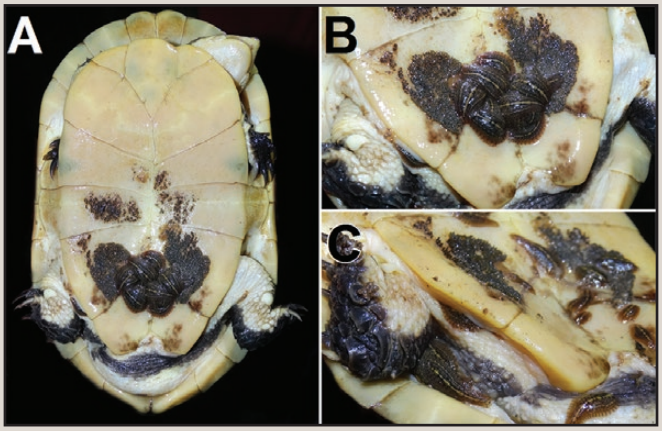

FIG. 1. An adult *Hydromedusa maximiliani* parasitized. A) Plastron containing adhered leeches; B) detail of the plastron; C) detail of posterior limb and tail with adhered leeches.