of precursor cartilages or even the development of accessory ossification centers may induce localized morphological abnormalities, such as polydactyly (Carretero et al. 1995. Bol. Asoc. Herpetol. Esp. 6:11). Galis et al. (2001, *op. cit.*) reported potential advantages in the presence of extra digits, such as increased ability to swim, dig, and climb.

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SQUAMATA — LIZARDS

***AGAMA PICTICAUDA* (Peter's Rock Agama). DISPERSAL.** On 6 October 2017 at 1745 h, while driving north on IH 95, just north of the Orange Ave exit near Ft. Pierce, Florida, USA, I observed a large lizard fall from the undercarriage of a car travelling at 113 kph in the lane next to me and two vehicles in front. The lizard was identified as a large *Agama*, likely *A. picticauda*, which is the most abundant and most widely distributed *Agama* in southeastern Florida (Nunez et al. 2016. Bull. Florida Mus. Nat. Hist. 54:138–146; EDDmaps.org). The specimen seemed to survive the fall. In 2018, I observed a Curlytail Lizard (*Leiocephalus carinatus*) drop from underneath a moving van on the same interstate highway; however, that individual did not survive the heavy traffic. "Hitchhiking" underneath moving vehicles is a potential pathway by which introduced lizards spread in southeast Florida. Such anthropogenic assistance for dispersal might explain why these species are abundant along major traffic corridors and why some disjunct populations are noted in parking areas, driveways, and rest stops (Smith and Engeman 2004. Florida Field Nat. 32:107–113; Enge et al. 2004. Florida Sci. 67:303–310 Meshaka et al. 2005. Southeast. Nat. 4:521–526; JAM, pers. obs.; EDDmaps.org).

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***AMEIVA AMEIVA* (Giant Ameiva). PREDATION.** *Ameiva ameiva* is a terrestrial diurnal teiid lizard widely distributed across the Neotropical region and common at forest edge, along open-banked waterways, and in disturbed habitats (Vitt et al. 2008. Guide to the Lizards of Reserva Adolpho Ducke, Central Amazonia. Áttema Design Editorial. 176 pp.). The American kestrel (*Falco sparverius*) is one of the smallest raptors of the world, widely distributed throughout Americas in both natural and anthropogenic habitats (Sick 1997. Ornitologia Brasileira. Editora Nova Fronteira. 912 pp.). At 1036 h on 12 December 2018, during a herpetological activity near an urban area of the municipality of Ji-Paraná (10.8629°N, 61.9652°W; WGS 84), state of Rondônia, one of us (WLIG) observed the predation event of an adult (130 mm SVL) of *Ameiva ameiva* by a male of *Falco sparverius* on top of a tree. The event was observed for ca. 6 min, and during this time, the teiid lizard was eviscerated and partially eaten by the bird. About three minutes after, the kestrel flew away carrying the lizard in its claws. The individuals were not collected.

Lizards are a food source for many raptors and other carnivorous bird species in neotropical forests (Poulin et al. 2001. J. Trop. Ecol. 17:21–40). Birds have been previously reported to prey on *Ameiva ameiva* (Batista de Pinho et al. 2010. Herpetol. Rev. 41:72; Mônico et al. 2016. Herpetol. Rev.47:663). Besides reporting our observation for the first time adds *F. sparverius* as a predator of the species *Ameiva ameiva*.

Fig. 1. Adult *Ameiva ameiva* being preyed upon by *Falco sparverius* on a high of tree in municipality Ji-Paraná, Rondônia, Brazil.

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***ANOLIS AQUATICUS* (= *NOROPS AQUATICUS*) (Water Anole). EGG SIZE AND OVIPOSITION SITES.** For many Neotropical reptiles, basic information on reproductive processes is lacking. Choice of oviposition sites, in particular, has a major effect on egg survival and parental reproductive success. However, this type of data is often not available for highly endemic or rare species. Here, we contribute egg size and oviposition site data for *Anolis aquaticus* (= *Norops aquaticus*), a semi-aquatic lizard. *Anolis aquaticus* lives at the edges of streams and small rivers in southwestern Costa Rica and western Panama. These field data were collected from three stream sites in Coto Brus, Puntarenas, Costa Rica between June–July 2018.

During a field survey of adult and juvenile *A. aquaticus*, we opportunistically encountered 9 *A. aquaticus* oviposition sites containing a total of 10 eggs. All eggs were found either in crevices in the rock riverbank walls (Fig. 1A, D) or under rocks on sandy/rocky strips of land bordering the stream (Fig. 1B, C). Eggs tended to be well hidden in these crevices, and some eggs found in rock wall crevices were wedged tightly between rocks. At one site, over the course of two weeks, a single female was repeatedly found in the same crevice as the egg (Fig. 1A), though it is unknown if this female produced the egg located here. With the exception of one oviposition site containing two eggs (Fig. 1D), eggs were found individually. When possible, eggs were removed and photographed next to a scale bar, then returned to their site of origin. The dimensions of each egg (with the exception of two that were not able to be dislodged from their crevices) were measured using ImageJ. For each oviposition site, we recorded the temperature, dimensions, height above the river's surface,

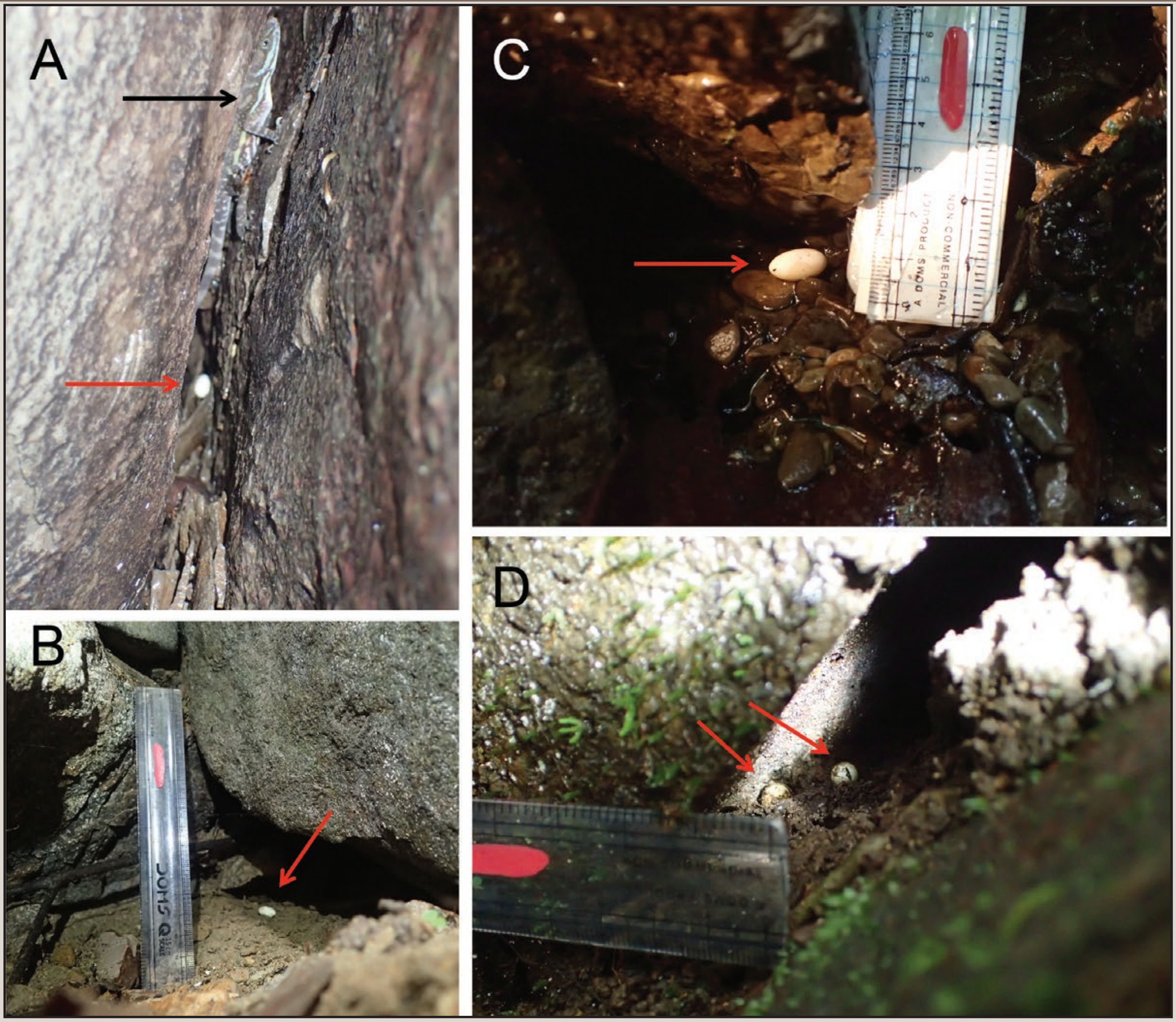

FIG. 1. Examples of *Anolis aquaticus* oviposition sites identified in Coto Brus, Puntarenas, Costa Rica from June–July 2018. Red arrows highlight the location of eggs in each photo. Oviposition sites included crevices (A) in rock walls, here shown with an *A. aquaticus* female (indicated with a black arrow) [J1], (B) formed by the juncture of boulders on sandy riverbank shores [J4], (C) fed by a small spring [G2], and (D) containing multiple eggs [W1, W2]. A ruler is included in Fig. 1B–D for scale. Codes in brackets correspond to Egg ID in Table 1.

TABLE 1. Egg dimensions and oviposition site characteristics of 10 *Anolis aquaticus* eggs located in Coto Brus, Puntarenas, Costa Rica in 2018. Length and width of the oviposition site refer to the dimensions of the opening of the crevice in which the egg was found; depth refers to the specific location of the egg within the crevice. "Vertical" is the distance from the river's current height to the oviposition site (y-axis), and "Horizontal" is the distance from the river's edge to the oviposition site (x-axis).

Egg ID	Egg dimensions		Oviposition site characteristics						Site description and notes
	Length (cm)	Width (cm)	Length (cm)	Width (cm)	Depth (cm)	Temp (°C)	Vertical (cm)	Horizontal (cm)	
G1	1.30	0.70	9.8	4.7	6.5	17.1	35	212	Rock wall
G2	1.44	0.95	5.0	2.0	1.0	20.7	73	100	Under rock on shore; spring-fed
J1	1.58	0.90	26.0	1.5	46.2	20.3	71	93	Rock wall; adult female present
J2	-	-	9.0	19.0	24.5	19.6	121	43	Rock wall
J3	-	-	14.0	1.0	50.8	17.8	37	30	Rock wall
J4	1.45	0.70	20.0	9.0	10.0	20.0	24	430	Under rock on shore
J5	1.36	0.87	15.2	15.0	29.7	19.2	55	305	Rock wall
W1	1.53	0.76	10.0	2.5	21.8	20.7	97	128	Rock wall; one of two eggs
W2	1.56	0.79	10.0	2.5	20.4	20.7	97	128	Rock wall; one of two eggs
W3	1.39	0.69	19.0	9.0	27.3	19.7	78	327	Rock wall

and distance to the edge of the river. All data are presented in Table 1.

Temperature of each oviposition site's substrate was measured during peak *A. aquaticus* activity hours (ca. 1000–1600 h) with an IR thermometer within 1 cm of the egg's location. Average substrate temperature of the 10 oviposition sites was 19.58°C (± 1.24 SE). During the same field season at these sites, we also recorded substrate temperatures of 413 *A. aquaticus* capture locations, which had an average temperature of 20.38°C (± 1.83 SE). Variation in oviposition site substrate temperature (ranging only 3.6°C) was smaller than that of perch sites (ranging 18.6°C).

The sole previous study on *A. aquaticus* reproduction incidentally notes that eggs were found exclusively in crevices in which they were in contact with small permanent springs, which was proposed as a strategy for avoiding desiccation (Márquez and Márquez 2009. Bol. Técnico Ser. Zool. 8:50–73). No additional details about *A. aquaticus* oviposition site characteristics are reported by Márquez and Márquez (2009, *op. cit.*). In our survey, only one of the 10 oviposition sites that we found was fed by a small spring (Fig. 1B). At our sites, high humidity within crevices (usually > 90%) might negate the need for direct contact with water and reduce the related risk of eggs being washed away at times of high water flow. Streams at our sites are wider (ca. 2–8 m wide) than the site described in Márquez and Márquez (2009, *op. cit.*) (1 m maximum width) and also experience occasional flooding. Despite their small range of this species, it is possible that *A. aquaticus* populations vary substantially in preferred oviposition sites given the relatively large differences in stream site characteristics (e.g., humidity, temperature, and stream width and flow) among populations.

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***ANOLIS CRISTATELLUS* (Puerto Rican Crested Anole) and *ANOLIS SAGREI* (Brown Anole). INTERSPECIFIC MATING.** Biological invasions bring species separated by evolutionary time into contact in novel environments. Co-occurence can result in interspecific courtship and mating leading to sexual interference that potentially mediates outcomes of novel species interactions (Dame and Petren 2006. Anim. Behav. 71:1165–1173). Southern Florida, USA hosts numerous non-native lizard species including anoles. *Anolis cristatellus* was introduced from Puerto Rico to southern Florida in the 1970s where it competes with *A. sagrei*, which was introduced to Florida from Cuba and the Bahamas (Kolbe et al. 2007. Conserv. Biol. 21:1612–1625). Interspecific mating has been observed in *Anolis* previously, including between a native and invasive species (Sater and Smith 2018. Herpetol. Rev. 49:114–115).

At 1750 h on 9 May 2018, I observed a male *A. cristatellus* pursuing and mating with a female *A. sagrei* at Montgomery Botanical Center in Miami-Dade County, Florida (25.66042°N, 80.28233°W; WGS 84; Fig. 1). Copulation lasted 3–4 minutes. To my knowledge, this is the first observation of interspecies mating between *A. cristatellus* and *A. sagrei*.

Fig. 1. Male *Anolis cristatellus* mating with female *Anolis sagrei* in Miami-Dade County, Florida, USA.

Both individuals had previously been captured at the site and given unique beadtags (visible in Fig. 1). The male *A. cristatellus* had an SVL = 47 mm, and the female *A. sagrei* had an SVL = 42 mm (both individuals measured two weeks prior to this observation). The male *A. cristatellus* was smaller than many other males present at this site. A nearby larger male *A. cristatellus* did not continue pursuit of the smaller male (interaction visible in video of the encounter available at: https://youtu.be/uENAPjdQhUg) after it began mating with the *A. sagrei*. It is possible that interspecific mating might allow smaller males to mate within territories of more dominant males with less danger of provoking territorial defense. Three other species of anoles are present at the site, including the native *A. carolinensis* and invasive *A. distichus* and *A. equestris*, raising the possibility of sexual interference between multiple species of anoles in this area. Given the evolutionary distinctness of these species (Poe et al. 2017. Syst. Biol. 66:663–697.), however, successful hybridization is unlikely.

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***ANOLIS SAGREI* (Brown Anole). PREDATION.** *Anolis sagrei* is native to Cuba and the Bahamas, and has been introduced to areas of the Pacific, Caribbean, and southeastern United States, including Texas and Florida (Kolbe et al. 2007. Mol. Ecol. 16:1579–1591). Across its native range, *A. sagrei* has many avian predators, including passerines (Henderson and Powell 2009. Natural History of West Indian Reptiles and Amphibians. University Press of Florida, Gainesville, Florida. 520 pp.). However, the extent of avian predation on *A. sagrei* in its non-native range is less known. Here we report observations of Loggerhead Shrike (*Lanius ludovicianus*) predation on *A. sagrei* in its non-native range (Texas and Florida, USA).

The Loggerhead Shrike is a passerine native to North America and is known to create "larders" of smaller vertebrate and invertebrate prey items by impaling them on natural and