TABLE 2. Home range sizes (ha) calculated for minimum convex polygons (MCP for 95% of points) for 10 turtles tracked in the Little Saskatchewan River in southwestern Manitoba from May 2010 to August 2012. For each individual, the number of times the turtle was located is indicated in brackets. For mean values the numbers of individuals is indicated in brackets.

Tag	Sex	2010 MCP	2011 MCP	2012 MCP
144	M	3.98 (13)	40.10 (11)	NA
160	M	NA	16.88 (10)	48.09 (7)
182	M	14.12 (14)	125.27 (11)	NA
223	M	68.00 (11)	160.64 (8)	67.15 (12)
286	M	11.68 (11)	4.36 (11)	19.45 (15)
307	M	3.95 (16)	NA	NA
240	F	11.25 (13)	320.85 (13)	NA
323	F	66.43 (10)	162.27 (11)	112.73 (13)
203	NA	10.07 (11)	NA	NA
261	NA	NA	NA	21.93 (9)
Mn ± SE		23.69 ± 9.59 (8)	118.62 ± 42.03 (7)	53.87 ± 17.15 (5)
Range		3.95 – 68.0	4.36 – 320.85	19.45 – 112.73
Mn ± SE (F)		38.84 ± 27.59 (2)	241.56 ± 79.29 (2)	NA
Mn ± SE (M)		20.35 ± 12.09 (5)	69.45 ± 31.06 (5)	44.90 ± 13.86 (3)

permanently create more aquatic habitat, because in 2012 they had home range sizes comparable to pre-flood levels in 2010. That said, there were differences in where they were spending their time in the non-flood years. In 2010, they were all found in the northern section of the river (Fig. 1), whereas in 2011 and 2012 some animals occupied the southern portions of the river, where it intersected with the Assiniboine River.

Possibly, individuals were swept downstream in 2011, resulting in larger home ranges. There were more turtles located downstream during 2011 compared to 2010 (Fig. 1). Currents were not measured along this stretch of the river during the flood event, but were significantly higher along the nearby Assiniboine River during the same time frame. On May 9, 2011, the Assiniboine River in Brandon recorded a peak flow of 1280 m^3/s, and a crest at 364 m above sea level (www.gov.mb.ca/flooding/2011/index.html; 1 October 2013). The southern edge of our study site includes the junction of the Little Saskatchewan and Assiniboine Rivers (Fig. 1) so high water levels on the Assiniboine River were directly affecting the Little Saskatchewan River, in addition to the high water volume on the Little Saskatchewan River itself. Water levels remained high on both the Little Saskatchewan and Assiniboine Rivers until August of 2011. Individuals may have been swept downstream, and then chose to hibernate in these locations and remained there during 2012. None of our tracked turtles were in the southern portion of the Little Saskatchewan River in 2010, but some were there in 2012 after the flood (Fig. 1).

It is also possible that females were moving downstream to seek out nesting habitat. In this system, we typically found nests and nesting females on sandy shorelines. During a flood event there will likely be less nesting habitat available, because the sandy shorelines were flooded and no longer be available. This may have caused the increase in female home range sizes. The two females that we tracked both increased their home range sizes, although our small samples sizes do not allow us to statistically test for differences between males and females. Given that both males and females increased their home range size, it is likely that the differences we saw during flooding were a combination of high flow rates and lack of nesting habitat. Given that climate change is likely to increase the frequency and severity of flood events, it is imperative that we further study these events so that we can have a better understanding of how these events impact animals both in the short- and long-term.

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***EMYS ORBICULARIS* (European Pond Turtle). NEONATE DIET.** Detailed information on the ecology of neonatal emydine turtles is scarce (Costanzo et al. 2008. J. Exp. Zool. 309A:297–379). Indeed, because of their small body size, and their high susceptibility to predation, field studies on neonatal emydids are logistically complex. Accordingly, the foraging ecology, and thus the precise composition of the diet of emerging young emydids is virtually unknown. Despite this lack of detailed information, it is usually assumed that neonatal emydine turtles rely on residual yolk until nest emergence and that; after emergence their diet is composed of gastropods and insects based on information gathered on larger juvenile individuals (Ottonello et al. 2005. Amphibia-Reptilia 26:562–565).

We studied *Emys orbicularis*, a typical emydine turtle species, in "Brenne" one of the largest wetlands of central France. These field studies include protection of nests, and subsequent monitoring of the emergence of neonates. At the end of the emergence

period, nests are excavated to assess the emerging success (number of viable young produced) as well as the presence and the number of dead individuals, dead embryos, or undeveloped eggs.

At the end of May 2017, three weeks after the usual latest emergence date, we excavated a nest that had produced two turtles. The nest also contained one dead individual, three dead embryos, and three undeveloped eggs. Surprisingly, we found an additional living neonate at the bottom of the nest. Upon capture, this individual defecated, suggesting that it had ingested solid food after birth while still being within the nest. Examination of the fecal pellet revealed that it was composed of the carapace scutes of other neonatal turtles.

This observation indicates that neonatal *E. orbicularis* can feed on solid food sources while still being within the nest. Although we do not know if the turtle consumed was alive, this seems unlikely, and to our knowledge, it is the first reported case of intra-nest necro-cannibalism in an emydine turtle species. We do not know whether the young had ingested parts of a (dead) sibling because it was unable to leave the nest or if it remained in the nest because it found food resources there. Future examinations of nest contents may allow us to quantify the frequency of such unusual behavior.

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***GLYPTEMYS INSCULPTA* (Wood Turtle) and *GRAPTEMYS GEOGRAPHICA* (Northern Map Turtle). INTERSPECIFIC BASKING.** Intraspecific basking has been observed in a number of North American turtle species (e.g., Weber and Layzer 2014. Herpetol. Rev. 45:117; Jones and Cochran 2014. Herpetol. Rev. 45:311–312; Hartzell et al. 2015. Herpetol. Rev. 46:621; Hartzell and Hartzell 2016. Herpetol. Rev. 47:453). On 28 June 2017 at 1330 h, I observed and photographed interspecific basking of *Glyptemys insculpta* with two *Graptemys geographica* (Fig. 1) within the North Branch of the Susquehanna River, Columbia County, Pennsylvania, USA. Identification of each species was confirmed with binoculars. All three turtles were observed basking on a fallen tree emerging from the river approximately 30 m from the riverbank within a section of the river approximately 280 m wide and several meters in depth. Each turtle was situated approximately 1 m away from the other turtles and all turtles remained in the same positions during approximately 10 minutes of observation.

Throughout their range, *G. insculpta* are known to occupy lotic habitats ranging from small streams to large rivers; however, some differences in typical lotic habitat use have been noted between populations (Harding and Bloomer 1979. HERP, Bull. New York Herpetol. Soc. 15:9–26; Ernst and Lovich 2009. Turtles of the United States and Canada, 2nd ed. Johns Hopkins University Press, Baltimore, Maryland. 827 pp.). *G. insculpta* populations associated with the Great Lakes region typically occupy larger streams and rivers, thus more often sharing habitat and basking opportunities with *G. geographica* (Harding 1990. *In* Beaman et al. [eds.], Proceedings of the 1st International Symposium on Turtles and Tortoises: Conservation and Captive Husbandry, pp. 31–35. California Turtle and Tortoise Club, Van Nuys, California; J. Harding, pers. comm.). However, eastern populations of *G. insculpta* more typically occupy smaller streams and overall appear to spend more time away from water seasonally than western populations of this species (e.g., Harding and Bloomer 1979, *op. cit.*; Kaufman 1992. J. Herpetol. 26:315–321; Ernst 2001. Chelon. Conserv. Biol. 4:94–99; Hartzell, pers. observ.). Because *G. geographica* typically inhabit large bodies of water (e.g., lakes, rivers; Pluto and Bellis 1986. J. Herpetol. 20:22–31; Ernst and Lovich 2009, *op. cit.*), this observation of interspecific basking with *G. geographica* appears to be unusual for *G. insculpta* populations in the eastern portion of their range.

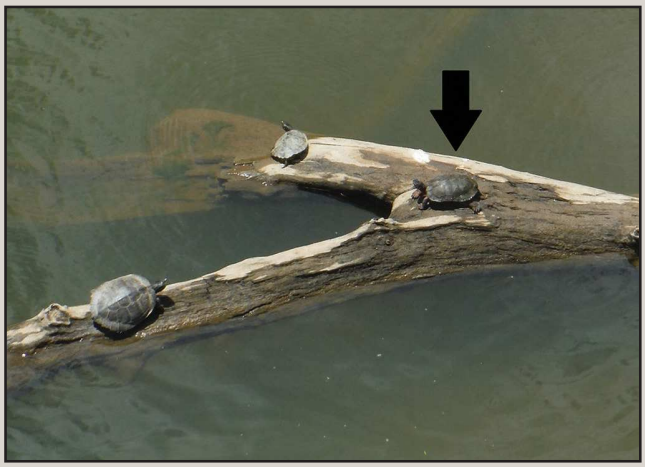

FIG. 1. *Glyptemys insculpta* (arrow) basking with *Graptemys geographica*.

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***PODOCNEMIS EXPANSA* (Giant South American River Turtle). JUVENILE MOVEMENT.** The Turtle Conservation Program of the Lower Negro River was founded in 2014, and is focused on a priority area for chelonian conservation in the Amazon (Fagundes et al. 2015. Divers. Distrib. 1–13). The program meets a demand from the Brazilian riverine communities of three protected areas (PAs: Jaú National Park, Rio Unini Extractive Reserve, and Rio Negro State Park North Section) to protect turtle species that are an important food resource. One of the program's principal aims is to promote the conservation and management of nesting

FIG. 1. Post-hatching *Podocnemis expansa* recaptured in the Jaú River, Amazonas State, Brazil. The figure shows the individual marked with the phalanx amputation method.