

HERPETOCULTURE NOTES

TESTUDINES — TURTLES

CUORA MOUHOTII MOUHOTII (Northern Keeled Box Turtle) and C. BOURETTI (Bourret's Box Turtle). CAPTIVE HYBRIDIZATION. Although "*Cuora serrata*" was originally described as a subspecies of *C. galbinifrons* (Iverson and McCord 1992. Proc. Biol. Soc. Washington 105:433–439), it later received full species status (Fritz and Obst 1997. Zool. Abh. Staatl. Mus. Tierk. Dresden 49:261–279). In 2001 genetic studies showed that it is a hybrid between male *C. mouhotii* ssp. and female *C. galbinifrons* or *C. bourreti* (Parham et al. 2001. Anim. Conserv. 4:357–367; Stuart and Parham 2004. Mol. Phyl. Evol. 31:164–177). "*Cuora serrata*" is now considered a collective noun for hybrids between members of the *C. galbinifrons*-complex and *C. mouhotii* sensu lato. Consequently, questions arose on the origin of this hybrid and in 2003 the first discovery of a wild "*C. serrata*" on Hainan (China) was reported (Shi et al. 2005. Amphibia-Reptilia 26:377–381). This proved at least a wild occurrence, but the possibility of a captive origin could not be excluded. Until now, no records of captive hybridization between members of the *C. galbinifrons*-complex and *C. mouhotii* sensu lato have been reported. Even in Chinese turtle farms there are no such farm-produced specimens (Zhou et al. 2008. Reptilia 61:27–34).

Only a small number of imported "*C. serrata*" are known to be kept in Europe, less than 50 in the USA, and equal numbers in China and Japan. In recent years, several hobbyists have attempted to produce these hybrids, but successful breeding has been

limited. However, reproductive events have occurred between "*C. serrata*" specimens on a few occasions (Philippen 2002. Schildkröten 9[4]:14–27; Philippen 2003. Schildkröten 10[1]:12–23; J. Barzyk, pers. comm.; B. Esser, pers. comm.; W. P. McCord, pers. comm.; M. Reimann, pers. comm.) as well as between "*C. serrata*" and *C. mouhotii* (M. R. Theiler, pers. comm.). Interestingly, this proves that at least some "*C. serrata*" are reproductively fertile.

In the following case, unintentional captive hybridization between a male *C. m. mouhotii* (169 mm SCL [straight carapace length]) and a female *C. bourreti* (156 mm SCL) occurred at the first author's residence. While temporarily housing these specimens together in 2005, several mating attempts were observed. On 9 April 2006, at least five months after the animals had been separated, a single egg (54.84 x 27.67 mm) was produced. The egg was incubated in a Jäger Kunstglucke FB 50 incubator at steady temperatures of 30°C for the first seven weeks and 28°C for the remaining period. After 81 days of incubation, the egg hatched on 26 June 2006. The hatchling measured 42.6 mm (SCL) and weighed 12 g. Remnants of a yolk sac were absent. Serrated hind marginals were clearly present as well as the dorsal and lateral keels (Fig. 1). These features are (nearly) absent in *C. bourreti* hatchlings (and other members within the *galbinifrons*-complex) and are more prominent in hatchlings of *C. mouhotii* sensu lato. At the age of eight years, the specimen has proven to be female. To our knowledge this is the first record of "*C. serrata*" being created in captivity from cross-breeding pure parental specimens. We emphasize that purposely hybridizing different taxa, especially those that are critically endangered, is undesirable and such events should be prevented in captivity.

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CROCODYLIA — CROCODYLIANS

CROCODYLUS INTERMEDIUS (Orinoco Crocodile). PARENTAL BEHAVIOR. In April 2014, we were filming a sequence about parental behavior in captive Orinoco Crocodiles for a natural history documentary. Four adults, three females and one male, were maintained in a 1280 m² (40 m x 32 m) enclosure at Wisirare Park (4.910397°N, 71.433817°W), Orocué, Casanare, Colombia. The females lay eggs almost every year and the eggs are removed and taken to the incubator room for hatching. On the first day of filming we buried a speaker, connected to a Samsung 3S via a long cable, in one of the artificial beaches and played previously recorded hatchling vocalizations. The female that usually nests on that beach responded to the stimulus and came out of the water to dig in the spot where the speaker was buried; suddenly



FIG. 1. Dorsal and ventral view of parental specimens (*Cuora m. mouhotii* [left], *C. bourreti* [middle]) and the hybrid offspring ("*C. serrata*" [right]).