A New Locality for *Cuora pani* Song 1984 with Comments on its Known Range

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Abstract.- The discovery of *Cuora pani* Song 1984 in northern Sichuan Province, China lends credence to the type locality in southern Shaanxi Province. The localities reported from southern Yunnan Province (the type region of *C. "chriskarannarum"*) require verification.

Key words.- Reptilia, Chelonia, Bataguridae, *Cuora pani*, *C. chriskarannarum*, *C. yunnanensis*, *C. zhoui*, China, Sichuan, Yunnan, distribution, biogeography

Cuora pani Song, 1984 is the first of many new Chinese chelonians to be described over the past fifteen years. The original description was based on two specimens from the Qin Ling Mountains (Pingli County, southern Shaanxi Province). Later, *C. pani* was inadvertently redescribed from southern Yunnan Province as *C. chriskarannarum* by Ernst and McCord (1987) based on pet-trade specimens. De Bruin (1988) first suggested the synonymy of *C. chriskarannarum* with *C. pani*. Subsequently, other authors (e.g., Phillipen pers. comm. in Stubbs, 1989; Pritchard, 1990; Zhao, 1990; McCord and Iverson, 1991) have either independently come to the same conclusion or at least agree with it. McCord and Iverson (1991) recognize that this synonymy requires that *C. pani* is reported from two areas which are separated by nearly 1200 km (Fig. 1). Given this unlikely distribution, they raise the possibility that one of the localities (if not both) are erroneous, but withhold further speculation since the distributions of all *Cuora* are very poorly understood. In this paper we report a new locality for *C. pani* which may shed some light on this issue.

In April of 1994 one of us (DL) heard reports of a turtle with a moveable plastron from people living in northern Sichuan. Due to the scarcity of these turtles, it took five years to acquire the first specimens. Three individuals were purchased in Guangyuan City by DL and were reportedly captured in the nearby tributaries of the Jialing River (105°. 40' E, 32° 30' N; Fig. 1). Two of the turtles are females; the largest is 180 mm in straight-line carapace length and weighs 625 grams. The smaller female is 110 mm in carapace length and 130g[1]. The only male is a juvenile (Fig. 2), 98 mm in carapace length and weighing 95g. All three turtles match descriptions of *Cuora pani* (Song, 1984; McCord and Iverson, 1991). Diagnostic characters include an olive head, olive-brown carapace, and, most importantly, a plastron with dark pigment associated with the seams in the form of rectangular bars.

The presence of these turtles in northern Sichuan Province lends credence to the type locality of *Cuora pani* in southern Shaanxi Province. The new locality also closes the distributional gap between the southern Shaanxi locality and the type region of *C. "chriskarannarum"* from nearly 1200 km to about 1050 km. Nevertheless, we feel that the Sichuan locality, by verifying the presence of *C. pani* in the northern tributaries of the Yangtze, casts doubt on the validity of the *C. "chriskarannarum"* localities. The latter localities become even more suspicious when the distribution of other species of *Cuora* are taken into account. For example, the type locality of *Cuora aurocapitata* (Luo and Zong, 1988) is in the eastern Yangtze drainage. *Cuora aurocapitata* is a close relative of *C. pani*, and may prove to be conspecific (McCord and Iverson, 1991). The close relation of *C. pani* and *C. aurocapitata* is reflected by their biogeographical distribution since both taxa inhabit the Yangtze River or its northern tributaries.

The type region of *C. "chriskarannarum"* is in the drainage of the Red River. Two divides separate these localities from the type region of *C. pani* (in southern Yunnan the Pearl River drainage lies between the Red River and the southwestern tributaries of the Yangtze). We can not rule out a corridor between the Red River and the Yangtze in northern Yunnan, but note that, in addition to a mountainous divide, other species of *Cuora* historically inhabited this area. *Cuora zhoui*

[1] This specimen has been accessioned into the Chengdu Institute of Biology herpetological collection as CIB-9910544

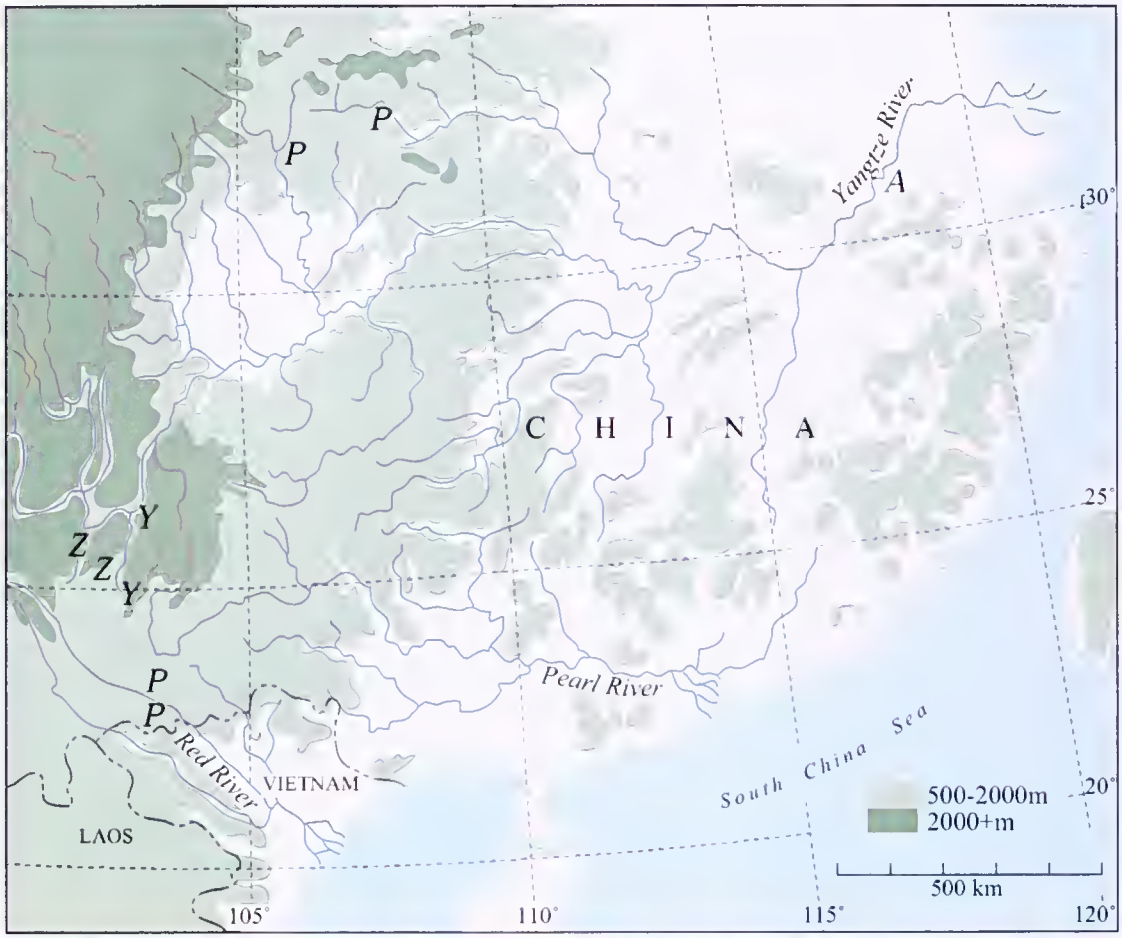

Figure 1. Map of China showing known localities of select aquatic *Cuora* species. A= *C. aurocapitata*, P= *C. pani*, Y= *C. yunnanensis*, Z= *C. zhoui*. Localities were taken from original descriptions, McCord and Iverson (1991), and Iverson (1992).

Zhao, 1990 (= *Cuora pallidicephala* McCord and Iverson, 1991) and *Cuora yunnanensis* (Boulenger, 1906) are both reported from tributaries of the Yangtze in northern Yunnan (Fig. 1). Like *C. "chriskarannarum"*, the Yunnan records for *C. zhoui* (the type series of *C. "pallidicephala"*) are derived from the pet trade (McCord and Iverson, 1991) and are from a different province than the type description (Zhao, 1990). Unfortunately, the type series of *C. zhoui* itself was purchased from a market so the exact provenience of this species remains uncertain. The localities for *C. yunnanensis*, however, are probably valid since they predate the increased turtle trade associated with recent economic reforms in China. The presence of at least one, and possibly two, congeners within the reported range of *C. pani* is strange since aquatic *Cuora* are generally allopatric.

A historic lowland connection between the southern Yunnan and northern Yangtze *Cuora pani* localities would require even greater geographical separation. Furthermore, this hypothetical connection would pass through the known distribution of *C. trifasciata* (McCord and Iverson, 1991), a close relative of *C. pani* and *C. aurocapitata* (de Bruin, 1988; Buskirk, 1989). In short, if the Yunnan Province *C. pani* localities are real, the biogeographical history of these turtles is very complex.

It is important to note that many of the localities for Chinese turtles, including the one reported here, are based upon market-bought or else pet trade animals. Pet trade localities, such as the southern Yunnan *Cuora pani* localities, should be treated with caution. The demand for rare species by turtle fanciers greatly increases their value and, therefore, there is incentive to hide the true locality as a "trade secret". Direct cooperation with people from turtle-bearing provinces, however, can help determine the distributions of these rare turtles.

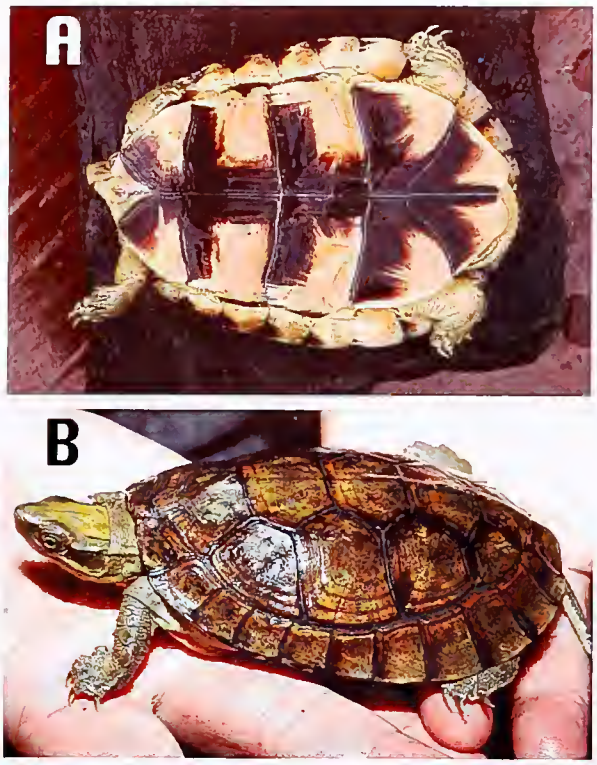

Figure 2. A) Ventral view of *Cuora pani* (male) from northern Sichuan Province (photo by Ermi Zhao). B) Lateral view of same individual (Photo by JFP).

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