

## Threatened fishes of the world: *Acipenser dabryanus* Duméril, 1869

Xin Gao · Jian Wei Wang · Sébastien Brosse

Received: 23 June 2008 / Accepted: 1 March 2009 / Published online: 11 March 2009  
© Springer Science + Business Media B.V. 2009

**Keywords** Yangtze sturgeon · IUCN Red List ·  
Critically endangered



**Common name:** Yangtze sturgeon; Dabry's sturgeon (English). **Conservation status:** Critically endangered A1acd+2 cd - IUCN Red List; Endangered – China Species Red List. Classified in Appendix II of CITES. **Identification:** Fin rays: D 44–66, A 25–41. Scutes: D 8–14, L 26–54, V 8–15. Gill rakers 32–55. Plates: post-dorsal 1–2, post-anal 1, pre-anal 1–2 (Artyukhin et al. 2007). Body covered with five lines of scutes, coarse back cutis, gray cyan on dorsal side, and yellow white on ventral side. Triangular head, inferior mouth, elongated snout, two pairs of barbells, big blowholes. More than 130 cm total length and 16 kg

weight (Zhuang et al. 1997). Figure from Anonymous (1976). **Distribution:** Endemic from the upper Yangtze basin, China. **Abundance:** Historically abundant and commercially exploited, but only captured occasionally during the last decade. Population probably scarce. **Habitat and ecology:** Potamodromous fish. Feeds on aquatic plants, benthic invertebrates and small fish. Inhabits slow flowing waters with muddy and sandy substratum. Sexual maturity from 4 to 8 years (Zhuang et al. 1997). Spawning grounds located upstream from Luxian reach in the upper Yangtze (Anonymous 1988). **Reproduction:** Spawns from March to April and occasionally from November to December (Anonymous 1988). Fecundity 57 000 – 102 000 eggs per female. Male spawns annually, but longer spawning interval for female (Zhuang et al. 1997). **Threats:** Population decline was related to overfishing, pollution, habitat destruction. Recent damming operations contributed to the species decline and fragmented the populations leading to a loss of genetic diversity (Wan et al. 2003; Fan et al. 2006). **Conservation recommendations:** Fishing management, habitat protection and restocking programs have been suggested (Zhuang et al. 1997; Wei et al. 2004). Based on successful artificial reproduction and stocking, a restocking program has

---

X. Gao · J. Wei Wang (✉)  
Institute of Hydrobiology, Chinese Academy of Sciences,  
7th southern road of East Lake,  
Wuhan, Hubei Province 430072, China  
e-mail: wangjw@ihb.ac.cn

S. Brosse  
Laboratoire Evolution et Diversité Biologique,  
U.M.R 5174, C.N.R.S – Université Paul Sabatier,  
118 route de Narbonne,  
F-31062 Toulouse cedex 4, France

been set recently. It permitted to release thousands of juveniles in the Yangtze in 2008.

## References

- Anonymous (ed) (1976) Fishes of the Yangtze River. Fishes study department, Institute of Hydrobiology, Hubei Province, Science Press, Beijing (in Chinese)
- Anonymous (ed) (1988) The biology of the sturgeon in Yangtze and their artificial propagation. The Yangtze Aquatic Resources Survey Group, Sichuan Scientific and Technical Publishing House, Chengdu (in Chinese)
- Artyukhin EN, Vecsei P, Peterson DL (2007) Morphology and ecology of Pacific sturgeons. *Environ Biol Fishes* 79:369–381
- Fan XG, Wei QW, Chang J, Rosenthal H, He JX, Chen DQ, Shen L, Du H, Yang DG (2006) A review on conservation issues in the upper Yangtze River — a last chance for a big challenge: Can Chinese paddlefish (*Psephurus gladius*), Dabry's sturgeon, (*Acipenser dabryanus*) and other fish species still be saved? *J Appl Ichthyol* 22(Supp. 1):32–39
- Wan QH, Fang SG, Li YN (2003) The loss of genetic diversity in Dabry's sturgeon (*Acipenser dabryanus*, Dumeril) as revealed by DNA fingerprinting. *Aquat Conserv — Marine and Freshwater Ecosystems* 13(3):225–231
- Wei Q, He J, Yang D, Zheng W, Li L (2004) Status of sturgeon aquaculture and sturgeon trade in China: a review based on two recent nationwide surveys. *J Appl Ichthyol* 20:321–332
- Zhuang P, Ke F, Wei Q, He X, Cen Y (1997) Biology and life history of Dabry's sturgeon, *Acipenser dabryanus*, in the Yangtze River. *Environ Biol Fishes* 48:257–264