

# Threatened fishes of the World: *Acipenser sinensis* Gray, 1834 (Acipenseriformes: Acipenseridae)

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## Introduction

**Common name:** Chinese sturgeon (English). **Conservation status:** Endangered—IUCN Red List, Endangered—China Species Red List. **Identification:** D 52–66, A 29–40, P 46–54, V 30–41. Five rows of scutes: D 10–16, L 26–42, V 8–16 (Anonymous 1988). Triangular head, inferior mouth, elongated snout, two pairs of barbells, spiracles. Adult length 2–4 m and maximum weight 452 kg (Chang and Cao 1999). Figure from Anonymous (1988). **Distribution:** Anadromous fish living in the Yellow, East and South China seas. Reproduction in Yangtze and Pearl Rivers. **Abundance:** Historically abundant and commercially important. In 1981, the construction of the Gezhouba dam blocked reproductive migration on the Yangtze River, leading to a sharp population decline (Chang and Cao 1999). The Pearl River population is small and little studied. **Habitat and Ecology:** Feeds



on shrimps and fishes. Late sexual maturity (8 to 26 years). Freshwater residency during 1 year prior to spawning. The native spawning grounds occupied a 800 km long Yangtze reach, from Xinshi in Jinsha River to Fuling in the upper Yangtze (Anonymous 1988). Since 1981, only a single 3 km long spawning site is still accessible (Kynard et al. 1995). **Reproduction:** Spawning period from late October to early November. Fecundity ranges 306 000–1 303 000. **Threats:** Gezhouba Dam blocks migration and reduces the spawning area to less than 1% of the original area. Three-Gorges Dam will further negatively affect reproduction by regulating water flow (Chang and Cao 1999). **Conservation recommendations:** Restocking and a ban on commercial fishery since the 1980s were not sufficient to prevent stock decline (Zhu et al. 2002). Alternative conservation measures such as artificial spawning grounds and protection of sturgeon eggs against predation are urgently needed.

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## References

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)
- Chang J, Cao W (1999) History and prospect of conservation on Chinese sturgeon in the Yangtze River. *Acta Hydrobiol Sin* 23:712–720 (in Chinese)
- Kynard B, Wei Q, Ke F (1995) Locating spawning area of Chinese sturgeon (*Acipenser sinensis*) by using hydro-acoustic survey technology. *Chin Sci Bull* 40:172–174 (in Chinese)
- Zhu B, Zhou F, Cao H, Shao Z, Zhao N, May B, Chang J (2002) Analysis of genetic variation in the Chinese sturgeon, *Acipenser sinensis*: estimating the contribution of artificially produced larvae in a wild population. *J Appl Ichthyol* 18:301–306