

FishBase species profile: *Clarias gariepinus* (Burchell, 1822)¹ North African catfish

Prepared by the FishBase team

In this issue *NAGA* introduces a new page on profiles of fish species. This page will be a permanent feature of the *NAGA* and will be based on information derived from FishBase (<http://www.fishbase.org>), the world's premier information system on fishes and a global public good. FishBase is being developed by the WorldFish Center and an International Consortium. The first species selected is the North African catfish *Clarias gariepinus*, one of the most important freshwater fish species in Africa. It has been chosen in honor of Prof Dr Guy Teugels of the Musée Royal de l'Afrique Centrale (MRAC) of Tervuren, Belgium, who recently passed away (see Announcement on page 39) and who spent many years investigating this species.

Common names: North African catfish (FAO English), Fig. 1; Poisson-chat nord-africain (FAO French); Pez gato (FAO Spanish); 80 names from 33 countries. **Importance:** fisheries, aquaculture (Fig. 2) and game. **Distribution:** almost Pan-African, absent from Maghreb, the upper and lower Guinea, the Cape province and probably also Nugal province. Asia: Asia Minor in Jordan, Israel, Lebanon, Syria and southern Turkey (Fig. 3). Widely introduced to other parts of Africa, Europe and Asia. Several countries report adverse ecological impact after introduction.

Ecology: occurs mainly in quiet waters, lakes and pools but may also occur in fast flowing rivers and in rapids. Widely tolerant of extreme environmental conditions. The presence of an accessory breathing organ enables this species to breath air when very active or under very dry conditions. Remains in the muddy substrates of ponds and occasionally gulps air through the mouth. Can leave the water at night using its strong pectoral fins and spines in search of land-based food or can move into the breeding areas through very shallow pathways. Nocturnal, feeding on the bottom and occasionally at the



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Fig. 1. *Clarias gariepinus*, 78cm TL, 3.5 kg

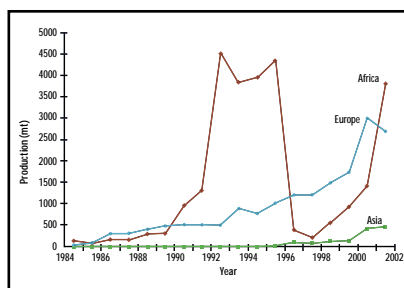
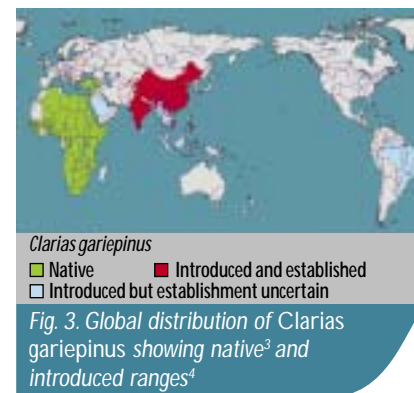


Fig. 2. Aquaculture production of *Clarias gariepinus* by continent from FAO statistics²

surface on a wide variety of prey. **Environment:** benthopelagic; freshwater; 8-35°C; pH range: 6.5-8.0; dH range: 5.0-28.0; depth range: 4-80 m. **Danger/impact:** potential pest. **IUCN Red List status:** not in IUCN Red List. **Main food:** mainly animals (troph. 2.8 and up). **Trophic level:** 3.15. **Food items:** bony fish; insects; benthic aquatic algae/weeds; terrestrial plants; zooplankton; phytoplankton; benthic crustaceans and mollusks. **Food consumption (Q/B):** 1.73 times the body weight per year. **Predator:** *Crocodylus niloticus*. **Reproduction:** dioecious; external fertilization; non-guarder; open water/ substratum egg scatterer. **Spawning season:** Sept-Dec in lake Chilwa, Malawi; July-Oct in Tapoa and small reservoirs in Burkina Faso; Mar-Aug in lake Manzala, Egypt; Feb-May in lake Awassa, Ethiopia. **Fecundity:** 36,805 (2,084 - 650,000). **Eggs:** benthic; spherical; 1.5 mm diameter.

Larvae: 4.4-4.8 mm hatching length. **Maturity:** Lm=30.5-37.5 cm TL; tm=2 yrs. **Remarks:** spawning takes place during the rainy season in flooded deltas. The fishes make a lateral migration towards the inundated plains to breed and return to the river or lake soon afterwards while the juveniles remain in the inundated area. **Growth/mortality parameters:** Max. size: 170 cm TL (male/unsexed), 60.0 kg; L infinity = 139 cm TL; K = 0.09/yr; Phi prime = 3.24; t₀ = -1.27 yrs.; Natural Mortality (M) = 0.20/yr. **L/W relationship:** W = 0.0105 * L^{3.013}. **Chromosomes:** 2n = 56; CF = 8m + 24-25sm + 23-24t; NF = 88-89. **Proximate analysis (%):** moisture (76.5); protein (19.0); fat (3.0); ash (1.5) based on 100 g edible weight.

For further information: contact the WorldFish Center FishBase Project Team, Los Baños, Philippines (fishbase@cgiar.org)



Clarias gariepinus
 ■ Native ■ Introduced and established
 □ Introduced but establishment uncertain

Fig. 3. Global distribution of *Clarias gariepinus* showing native³ and introduced ranges⁴

FishBase online sources used in producing the above species profile:

¹ <http://www.fishbase.org/Summary/SpeciesSummary.cfm?ID=1934&genusname=Clarias&speciesname=gariepinus>

² <http://www.fishbase.org/report/FAO/FAOaquacultureList.cfm?scientific=Clarias%20gariepinus>

³ <http://www.fishbase.org/Country/CountryList.cfm?ID=1934&genusname=Clarias&speciesname=gariepinus>

⁴ <http://www.fishbase.org/Introductions/IntroductionsList.cfm?ID=1934&GenusName=Clarias&SpeciesName=gariepinus&fc=139&stockcode=2130>