Family Esocidae

Pikes

The family comprises three genera (*Esox*, *Dallia*, *Novumbra*) related to salmonid fishes and the mudminnows of the family Umbridae. *Esox*, comprises seven species, three of which are endemic to North America and two endemic to Europe. They are highly distinctive, predatory fishes with a large, duckbill-like snout and dorsal and anal fins located far back on the body. *Esox lucius*, native to North America and Eurasia; *E. cisalpinus*, endemic to Italy; and *E. aquitanicus*, endemic to France, are species known from the West Palearctic. Additionally, *E. reichertii* is endemic to the Amur basin in Russia, Mongolia, and China. Pikes have a rich fossil record, spanning from the Late Cretaceous to the Holocene and covering much of the northern hemisphere. The first species of Esox (*E. tiemani*) was discovered in the Palaeocene of Alberta and Saskatchewan (Canada), estimated to be approximately 62 million years old. Fossils of *Esox* from the Eocene and later periods are also well documented in Europe. Due to its commercial value, *E. lucius* has been introduced locally in West Asia. In Spain, the introduction of *E. lucius* has resulted in the local extirpation of almost all native fish species, where *Esox* maintain high population densities and feed predominantly on crayfish (also introduced). The ecological effects of non-native pike in West Asia still need to be studied. **Further reading.** Crossman 1978 (systematics); Wilson 1980 (fossil pikes); Denys et al. 2014 (species diversity).

Esox lucius

Common name. Pike.

Diagnosis. Distinguished from other freshwater fishes in West Asia by: ○ snout long / ○ mouth large / ○ dorsal origin slightly in front of anal origin / ○ 105–148 total lateral line scales. Size up to 1300 mm SL.

Distribution. Native to Caspian, Black, Baltic, White, Barents, Arctic, North and Aral Seas and Atlantic basins, southwest to Loire drainage; Mediterranean basin, in Rhône drainage. Widespread in North America, Central Asia, and Siberia east to Anadyr drainage (Bering Sea basin). Historically absent from North Africa, Mediterranean, endorheic basins of West Asia, and Persian Gulf basin. Also, non-native to Iberian Peninsula, Mediterranean France, Italy, southern and western Greece, eastern Adriatic basin, Iceland, western Norway, and northern Scotland. Now widely introduced and translocated throughout West Asia, North Africa and Europe.

Habitat. Occurs in a variety of habitats with aquatic or periodically flooded vegetation. Often semi-anadromous in parts of northern Baltic basin with lower salinity.

Biology. Males spawn first at 170–350 mm SL, females at 250–400 mm SL, at 1–6 years. Reproduction closely linked to presence of submerged vegetation. Spawns in late winter–early spring, between February in south and June in north, when temperatures rise above 5°C. Several males compete for a single female. Eggs are laid in flooded areas and on submerged vegetation over a

Esox lucius; Danube drainage, Germany; ~350 mm SL. © A. Hartl.

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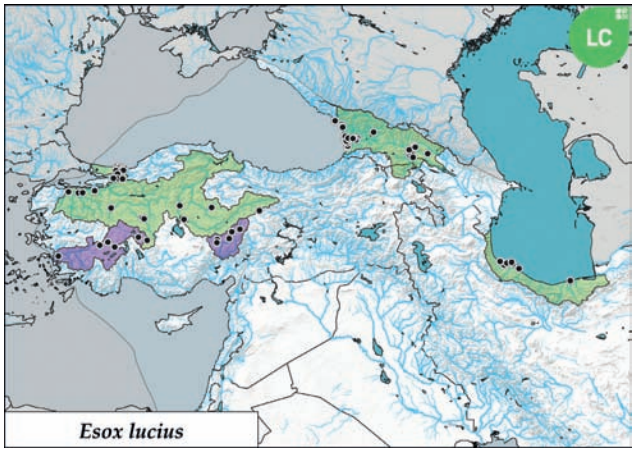
period of 2–5 days. Juvenile survival is negatively related to biomass of older individuals and positively related to area of submerged vegetation. Feeds on a variety of small vertebrates, mainly fish and large invertebrates such as decapod crustaceans. Cannibalism is common. In Arctic lakes, there may be only pike in a given body of water; in such cases, juveniles feed on invertebrates and terrestrial vertebrates; large individuals are predominantly cannibals. Other fish avoid areas with pike feces, which contain alarm pheromones.

Conservation status. LC.

Further reading. Craig 2008 (biology); Casselman et al. 1986 (morphology); Skov & Nilsson 2018 (biology).



Lake Eğirdir and many other endemis hotspots in West Asia are threatened by the invasion of non-native pike.