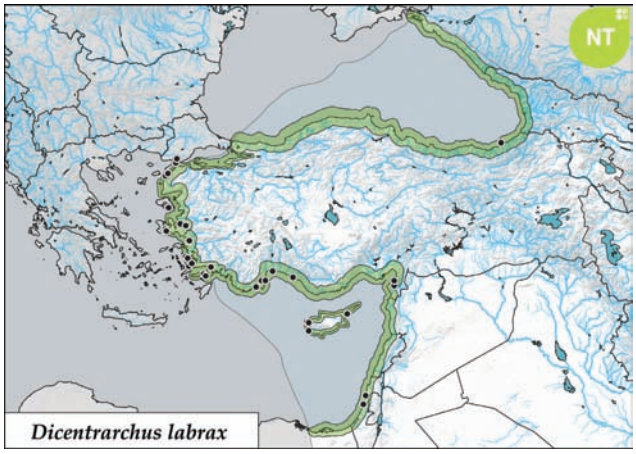
# Family Moronidae

## Temperate basses

The family comprises two genera, *Morone,* with four species in North America and *Dicentrarchus,* with two species in the Eastern Atlantic, Black Sea, and Mediterranean. They are distinguished by having two narrowly separated dorsals, two opercular spines, a lateral line extending almost to the posterior margin of the caudal, and auxiliary rows of lateral-line scales on the caudal above and below the main row. The two *Dicentrarchus* species enter brackish waters. *Dicentrarchus labrax* is the only species of the genus known to inhabit freshwater habitats. In contrast, *D. punctatus* is known to enter brackish waters only occasionally on the Atlantic coasts of France, the Iberian Peninsula, and the Mediterranean, and the western Black Sea. Hybrids between female *Morone saxatilis* and male *M. chrysops* are increasingly used in aquaculture in Israel and several European countries. There are many records of individuals who have escaped from captivity. Hybrids are fertile but produce only a few offspring. As aquaculture of these fishes expands, the number of records will increase, potentially leading to the establishment of local populations. This voracious predator exerts strong effects on fish communities. *Morone* hybrids can be distinguished from *Dicentrarchus* species by having small serrations along the lower part of the preoperculum, directed downward (vs. forward) and 5–7 lateral stripes (vs. body plain or spotted). *Dicentrarchus* can be distinguished from superficially similar *Sander* species and (introduced) *Micropterus* by the presence of spines on the lower part of the preoperculum (vs. preoperculum smooth), the presence of auxiliary rows of lateral-line scales on the caudal (vs. absence), the concave posterior margin of the anal (vs. convex in *Micropterus*), and the presence of three anal spines (vs. two in *Sander*).
**Further reading.** Johnson, in Moser et al. 1984 (phylogeny); Pickett & Pawson 1994 (biology); Müller-Belecke & Zienert 2006 (*Morone* aquaculture).

*Dicentrarchus labrax*; Adriatic Sea, Croatia; ~300 mm SL.

***Dicentrarchus labrax***
**Common name.** Sea bass.
**Diagnosis.** Distinguished from *D. punctatus* by: ● 65–80 lateral-line scales on body (vs. 58–68) / ● adults without small black spots on upper part of body (vs. with black spots) / ● vomerine teeth in an anchor shape patch (crescentic band with a median posterior extension (vs. crescentic band only) / ● scales in interorbital area cycloid (vs. ctenoid). Size up to 1000 mm SL.
**Distribution.** Mediterranean and Black Sea coasts. Coasts of Atlantic Morocco as far north as Norway, but absent from White, Barents, and Caspian Seas.
**Habitat.** Coastal waters and estuaries.



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**Biology.** Lives up to 30 years. Spawns first time at 4–7 years and about 350 (male) and 420 (female) mm SL. Spawns pelagic in open sea, in January–June at temperatures above 9°C. Larvae planktonic. Juveniles move inshore as they grow, aggregating in brackish estuarine nursery areas where they usually remain until second summer. Large juveniles and adults exhibit a complex migratory pattern at sea, moving inshore and into estuarine freshwaters during summer to feed. Juveniles feed on invertebrates, taking more fish as they grow. Adults are piscivorous.

**Conservation status.** NT; numbers have declined over the last 20 years due to overfishing.

**Further reading.** Whitehead & Wheeler 1966 (systematics); Bauchot & Pras 1980 (diagnosis); Pickett & Pawson 1994 (biology).

**Obsession on length-weight relationships and its ethical methodological pitfalls.** Attend any fisheries conference or browse recent ichthyological journals and you will encounter length-weight relationship (LWR) studies. These seemingly simple allometric equations have become the default metric for fish biologists and are often treated as fundamental biological constants that define species or its ecology. However, this widespread interest masks serious ethical and scientific shortcomings that deserve critical examination. Beyond its technical limitations, such as ontogenetic allometry, seasonal condition shifts and gear selectivity biases (almost none of which are included in LWR studies), a worrying trend of 'data opportunism' has emerged. Under the noble justification of maximising the utility of fieldwork, researchers frequently do large, unplanned fish collections, vaguely promising that they might one day feed into LWR analyses. This opportunistic sampling contradicts the fundamental principles of responsible science. Without clear, hypothesis-driven frameworks, such collections are neither representative nor reproducible, introducing biases that make LWR models context-specific at best and misleading at worst. The ethical dimension is equally troubling. The unnecessary removal of living organisms, especially from vulnerable populations, conflicts with conservation objectives. When sample sizes are determined by the belief that 'more is better' rather than by statistical power calculations linked to specific research questions, there is a risk of causing harm without achieving a significant increase in our knowledge. This is of particular concern in West Asian freshwater ecosystems, where many species are under increasing pressure from human activities. Most critically, this obsession creates a false sense of biological understanding. Knowing that a fish weighs X grams at Y centimetres tells us almost nothing about its ecological role, evolutionary history or conservation needs. The taxonomic community has also fallen victim to this trend, simply to inflate their publication number. This is driven by academic pressure to prioritise quantity over quality, resulting in shallow insights that contribute little to our understanding of species taxonomy or ecology. Moving forward, fish sampling protocols should be based on well-defined hypotheses and power analyses should be used to determine the minimum sample size required to achieve sufficient statistical power. Alternative non-lethal condition indices and in situ photographic measurements should be adopted more widely to ensure that LWR work is both methodologically robust and ethically defensible.