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**ANNOTATED CHECKLISTS OF FISHES**

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**Family Scomberesocidae Müller 1843**

sauries

By

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The Scomberesocidae is the sister group of the Belonidae, forming the superfamily Scomberesocoidea and sharing two derived characters: presence of a premaxillary canal and an upper jaw that is at least slightly elongate (Collette et al. 1984 [ref. 11422]). The Scomberesocidae is defined by one derived character: the dorsal and anal fins are followed by a series of 4–7 finlets. Other diagnostic characters of the family include: third pair of upper pharyngeal bones separate, fourth upper pharyngeal bone usually present, and scales on the body relatively small. There are no spines in the fins. The dorsal fin, with 14–18 rays, and anal fin, with 16–21 rays, are posterior in position. The pelvic fins, with 6 soft rays, are located in an abdominal position. The pectoral fins are short and have 8–15 rays. The caudal fin is deeply forked and symmetrical, similar to a mackerel tail. The lateral line, when present, runs along the ventral margin of the body. Gill rakers are present, with 15–51 on the first gill arch. Precaudal vertebrae number 32–43, caudal vertebrae 21–29, and total vertebrae 54–70. The family comprises four extant species, two of them notably larger than the other two. The two larger sauries, *Cololabis saira* and *Scomberesox saurus*, attain maximum sizes of about 400 and 450 mm (15.7 and 17.7 in) SL; and the two dwarf sauries, *C. adocoetus* and *S. simulans*, reach 126 and 68 mm (5.0 and 2.7 in) SL, respectively.

The family-group name dates from Müller (1843 [ref. 3063]) as *Scomberesoces* which was modified by subsequent authors such as Richardson (1846 [ref. 3742]) and Günther (1866 [ref. 1983]) into *Scomberesocidae*. The name of the type genus, *Scomberesox*, was misspelled in some early literature as *Scombresox*. Recent molecular research (Lovejoy 2000 [ref. 26767]) indicates that sauries might be better placed together with some needlefishes such as *Belone* in a revised classification but such action awaits morphological confirmation. Type catalogs are available for beloniform fishes in two major collections: USNM (Collette et al. 1992 [ref. 19410]) and MNHN (Collette et al. 1997 [ref. 22813]). Taxonomists classify the four species of sauries either in four monotypic genera, namely *Scomberesox* and its dwarf derivative *Nanichthys*, and *Cololabis* and its dwarf derivative *Elassichthys* (Hubbs and Wisner 1980 [ref. 2267]); or in two genera, considering *Nanichthys* a synonym of *Scomberesox* and *Elassichthys* a synonym of *Cololabis* (Collette et al. 1984 [ref. 11422]), as in the classification used here. Both species of *Scomberesox* develop an elongate beak; the snout increases in length in *S. simulans* throughout its life-span and in *S. saurus* until a length of about 200 mm SL. The two dwarf species, *C. adocoetus* and *S. simulans*, differ convergently from the two larger species, *C. saira* and *S. saurus*, in being much smaller, having lost one ovary and the swim bladder, and having fewer vertebrae, branchiostegal rays, pectoral fin rays, and gill rakers. *Scomberesox* inhabits the Atlantic, Pacific, and Indian oceans, and the Arctic Ocean off western Europe. *Cololabis* is restricted to the Pacific Ocean.

Sauries spend most of their life in warm homogeneous surface layers of the open sea, far from shallow continental shelf waters. They live close to the surface; so close that in English waters, where Atlantic

saury (*S. saurus*) are plentiful in summer, few are caught in nets as deep as 2 m. Atlantic saury are one of the most abundant epipelagic planktivores inhabiting the open part of the Atlantic Ocean, feeding mainly on siphonophores, copepods, euphausiids, amphipods, fish eggs and larvae, protozoans, algae, and larvae of polychaetes, decapods, isopods, ostracods, cirripeds, and siphonophores. Biology of the Atlantic saury was summarized by Dudnik et al. (1981 [ref. 27200]) and early life history by Hardy and Collette (2003 [ref. 27201]). Sauries serve as food for many inhabitants of the sea, such as squids, swordfish, marlins, sharks, tunas, dolphins, whales, and birds. The great abundance of sauries and their wide distribution make them an important link in the epipelagic food chain of the ocean by transferring energy from lower to higher trophic levels. Sauries are short-lived, the Pacific saury (*C. saira*) not living more than 2 years (Shelekhov and Baitalyuk 2001 [ref. 27203]). The two larger sauries are valuable food-fishes in some parts of the world; Atlantic saury are important in the Mediterranean, and Pacific saury are a favorite in Japan. At present, there is no fishery for saury in the northwest Atlantic, but an experimental fishery was conducted by Russian vessels during 1969–1974. Sauries were caught in nets suspended from booms along the side of the vessels, the fish being attracted by bright lights.

**Genus *Cololabis* Gill 1896**

*Cololabis* Gill 1896:176 [ref. 6957]. Type species *Scomberesox brevirostris* Peters 1866. Type by monotypy.

*Elassichthys* Hubbs & Wisner 1980:534 [ref. 2267]. Type species *Cololabis adocetus* Böhlke 1951. Type by original designation (also monotypic).

***Cololabis adocetus* Böhlke 1951**

*Cololabis adocetus* Böhlke 1951:83 [ref. 12884] (160 miles southwest of San Juan, Peru, 17°00'S, 76°50'W). Holotype: CAS 20432.

DISTRIBUTION: Eastern Pacific.

***Cololabis saira* (Brevoort 1856)**

*Scomberesox saira* Brevoort 1856:281 [29 of separate], Pl. 7 (fig. 1) [ref. 17284] (Simoda, Japan). No types known.

*Scomberesox brevirostris* Peters 1866:521 [ref. 3439] (Tomales Bay, California, U.S.A.). Syntypes: ZMB 6194 (2).

DISTRIBUTION: North Pacific.

**Genus *Scomberesox* Lacepède 1803**

*Scomberesox* Lacepède 1803:344 [ref. 4930]. Type species *Scomberesox camperii* Lacepède 1803. Type by monotypy.

*Sayris* Rafinesque 1810:60 [ref. 3594]. Type species *Sayris recurvirostra* Rafinesque 1810. Type by subsequent designation.

*Grammiconotus* Costa 1862:55 [ref. 4852]. Type species *Grammiconotus bicolor* Costa 1862. Type by monotypy.

*Nanichthys* Hubbs & Wisner 1980:530 [ref. 2267]. Type species *Nanichthys simulans* Hubbs & Wisner 1980. Type by original designation (also monotypic).

REMARKS: Jordan and Evermann (1896:725 [ref. 2443]) designated the type species of *Sayris*.

***Scomberesox saurus* (Walbaum 1792)**

*Esox saurus* Walbaum 1792:93 [ref. 4572] (Cornwall and British seas). No types known.

*Esox brasiliensis* Pennant 1787:145 [ref. 16802] (Croque Harbor, Newfoundland, 51°03'N, 55°48'W). No types known.

- Scomberesox camperii* Lacepède 1803:344, 345, Pl. 6 (fig. 3) [ref. 4930] (no locality). No types known.
- Sayris recurvirostra* Rafinesque 1810:61, Pl. 9 [ref. 3594] (no locality). No types known.
- Sayris bimaculatus* Rafinesque 1810:62 [ref. 3594] (Palermo, Sicily). No types known.
- Sayris serrata* Rafinesque 1810:61 [ref. 3594] (Sicily). No types known.
- Sayris hians* Rafinesque 1810:61, Pl. 9 (fig. 1) [ref. 3594] (Palermo, Sicily). No types known.
- Scomberesox scutellatum* Lesueur 1821:132 [ref. 13274] (Banks of Newfoundland, Canada [stomach content]). No types known.
- Scomberesox equirostrum* Lesueur 1821:132 [ref. 13274] (no locality). Holotype: Linn. Soc. Boston (dried specimen), whereabouts unknown.
- Scomberesox storeri* DeKay 1842:229, Pl. 35 (fig. 111) [ref. 1098] (no locality). No types known.
- Sairis scombroides* Richardson 1843:26 [ref. 12502] (Dusky Bay, New Zealand). No types known.
- Scombresox rondelietii* Valenciennes in Cuvier & Valenciennes 1846:473 [ref. 1011] (Mediterranean Sea). Syntypes: MNHN 5431 (2 specimens), B-1086–1091 (2, 4, 3, 5, 3, 4 specimens).
- Scombresox forsteri* Valenciennes in Cuvier & Valenciennes 1846:481 [ref. 1011] (New Zealand). No types known.
- Grammiconotus bicolor* Costa 1862:55, Pl. 1 (fig. 4) [ref. 4852] (Naples, Italy). No types known.
- Scomberesox stolatus* de Buen 1959:262 [ref. 11964] (Chile, 35°20'S, 75°23'W). Holotype: MNHNC P.5906 [ex EBMC 10196].

DISTRIBUTION: Cosmopolitan but antitropical.

REMARKS: *Sayris recurvirostra* Rafinesque 1810 is an unneeded new name for *Scomberesox camperii* Lacepède 1803. The new name also appeared in Rafinesque (1810:33 [ref. 3595]).

Illustrations of two of Lesueur's 1821 species, *Scomberesox scutellatum* and *S. equirostrum*, were not included in the original descriptions but later were found and published by Phillips (1955:4, Pl. 1 (figs. 2 and 3) [ref. 21818]).

*Scomberesox storeri* DeKay 1842 is an unneeded new name for *Scomberesox equirostrum* Lesueur 1821, which was regarded as inappropriate.

Hubbs and Wisner (1980 [ref. 2267]) recognized two subspecies of *Scomberesox saurus*: *S. saurus saurus* in the Northern Hemisphere and *S. saurus scombroides* (Richardson) in the Southern Hemisphere.

***Scomberesox simulans* (Hubbs & Wisner 1980)**

*Nanichthys simulans* Hubbs & Wisner 1980:531, Fig. 5, upper [ref. 2267] (central South Atlantic, 24°2.5'S, 15°32'W). Holotype: SIO 63-546.

DISTRIBUTION: Warm-temperate waters of the Atlantic and Indian oceans.

**Summary Lists**

**Genus-Group Names of Family Scomberesocidae**

- Cololabis* Gill 1896 = *Cololabis* Gill 1896
- Elassichthys* Hubbs & Wisner 1980 = *Cololabis* Gill 1896
- Grammiconotus* Costa 1862 = *Scomberesox* Lacepède 1803
- Nanichthys* Hubbs & Wisner 1980 = *Scomberesox* Lacepède 1803
- Sayris* Rafinesque 1810 = *Scomberesox* Lacepède 1803
- Scomberesox* Lacepède 1803 = *Scomberesox* Lacepède 1803

**Incertae Sedis Genus-Group Names**

None

**Unavailable Genus-Group Names**

None

**Species-Group Names of Family Scomberesocidae**

*adocetus*, *Cololabis* Böhlke 1951 = *Cololabis adocetus* Böhlke 1951  
*bicolor*, *Grammiconotus* Costa 1862 = *Scomberesox saurus saurus* (Walbaum 1792)  
*bimaculatus*, *Sayris* Rafinesque 1810 = *Scomberesox saurus saurus* (Walbaum 1792)  
*brasiliensis*, *Esox* Pennant 1787 = *Scomberesox saurus saurus* (Walbaum 1792)  
*brevirostris*, *Scomberesox* Peters 1866 = *Cololabis saira* (Brevoort 1856)  
*camperii*, *Scomberesox* Lacepède 1803 = *Scomberesox saurus saurus* (Walbaum 1792)  
*equirostrum*, *Scomberesox* Lesueur 1821 = *Scomberesox saurus saurus* (Walbaum 1792)  
*forsteri*, *Scomberesox* Valenciennes 1846 = *Scomberesox saurus scombroides* (Richardson 1843)  
*hians*, *Sayris* Rafinesque 1810 = *Scomberesox saurus saurus* (Walbaum 1792)  
*recurvirostra*, *Sayris* Rafinesque 1810 = *Scomberesox saurus saurus* (Walbaum 1792)  
*rondeletii*, *Scomberesox* Valenciennes 1846 = *Scomberesox saurus saurus* (Walbaum 1792)  
*saira*, *Scomberesox* Brevoort 1856 = *Cololabis saira* (Brevoort 1856)  
*saurus*, *Esox* Walbaum 1792 = *Scomberesox saurus saurus* (Walbaum 1792)  
*scombroides*, *Sairis* Richardson 1843 = *Scomberesox saurus scombroides* (Richardson 1843)  
*scutellatum*, *Scomberesox* Lesueur 1821 = *Scomberesox saurus saurus* (Walbaum 1792)  
*serrata*, *Sayris* Rafinesque 1810 = *Scomberesox saurus saurus* (Walbaum 1792)  
*simulans*, *Nanichthys* Hubbs & Wisner 1980 = *Scomberesox simulans* (Hubbs & Wisner 1980)  
*stolatus*, *Scomberesox* de Buen 1959 = *Scomberesox saurus scombroides* (Richardson 1843)  
*storeri*, *Scomberesox* DeKay 1842 = *Scomberesox saurus saurus* (Walbaum 1792)

**Incertae Sedis Species-Group Names**

*lemuridens*, *Scomberesox* Bennett 1832:4 [ref. 16788].  
*saurus*, *Esox* Bloch & Schneider 1801:394 [ref. 471].

**Unavailable Species-Group Names**

*maculata*, *Sayris* Rafinesque 1810:34 [ref. 3595]. Misspelling. In the synonymy of *Scomberesox saurus* (Walbaum 1792).

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