

California Academy of Sciences

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**ANNOTATED CHECKLISTS OF FISHES**

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**Family Trichodontidae Bleeker 1859**

sandfishes

By

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Sandfishes are small, compressed, silvery fishes inhabiting nearshore waters of the North Pacific Ocean. They are most active at night and are attracted by lights at the surface. During the day they rest partially buried in sand or mud with their eyes, mouth, and dorsal fins showing. Body deep and strongly compressed. Mouth large, upward-oriented, strongly oblique; lips with a fleshy fringe. Preopercle with 5 prominent spines. Two dorsal fins, well separated, the first supported by 8–16 spines and the second by 0–1 spine and 12–20 soft rays. Anal fin with 0–1 spine and 28–32 soft rays. Caudal fin large, forked or truncate. Pectoral fins large and fanlike, extending practically to ventral midline, rays thickened; 21–27 rays. Pelvic fins thoracic, with 1 spine and 5 rays. Nostrils tubular, one pair (posterior pair absent). Scales absent. Lateral line canal well developed, located high on body and following dorsal contour to caudal fin. Teeth small, sharp, in 2 or 3 rows on jaws and vomer; absent from palatines. Gill membranes united anteriorly and free of the isthmus. Branchiostegal rays 5 or 6. Gill rakers slender, fairly numerous (16–21). Swim bladder absent. Vertebrae 44–52. Silvery, with dark brown mottling and bars dorsolaterally. Maximum size 30 cm (12 in). Marine; intertidal to depth of about 400 m, typically shallower than 200 m, on soft bottoms of flat relief. Not commercially fished. Caught incidentally in trawl fisheries for shrimp and flatfishes, and easily caught by hand along sandy beaches where abundant. Feed on small invertebrates. Found only in North Pacific Ocean. Two monotypic genera.

The first use of the family-group name apparently was by Bleeker (1859:xx [ref. 371]), as a subfamily in a family Percoidei. Nelson (1994 [ref. 26204]) very provisionally placed the Trichodontidae in the suborder Trachinoidei, acknowledging that further research may demonstrate that their relationships belong outside this taxon. From study of the only known fossil trichodontid, recently discovered in Miocene deposits on Sakhalin Island, as well as the osteology of the extant species, Nazarkin and Voskoboinikova (2000 [ref. 26627]) proposed classifying the family by itself in a suborder Trichodontoidei.

**Genus *Arctoscopus* Jordan & Evermann 1896**

*Arctoscopus* Jordan & Evermann 1896:464 [ref. 2442]. Type species *Trichodon japonicus* Steindachner 1881. Type by original designation (also monotypic).

***Arctoscopus japonicus* (Steindachner 1881)**

*Trichodon japonicus* Steindachner 1881:182 [4 of separate], Pl. 4 (figs. 1, 1a) [ref. 4231] (Gulf of Strietok, Sea of Japan; and Sitka, Alaska, U.S.A.). Syntypes: NMW 76838–39 (1, 1), 75553 (2).

*Arctoscopus japonicus hachirogatensis* Hatai 1955:29, Figs. 7, 8 [ref. 12274] (Hachiro-gata, Akita Prefecture, Japan). Holotype (unique): Reg. No. P-116 (Dep. Geol., Tohoku Univ., Sendai).

DISTRIBUTION: Western North Pacific: Aleutian Islands (one record) to Okhotsk and Japan seas.

REMARKS: The type locality for *Trichodon japonicus* as Sitka is probably an error (Jordan and Gilbert 1899:479 [ref. 2478]).

The subspecies *A. j. hachirogatensis* is based on an otolith.

*Arctoscopus japonicus* is reported to be rare north of Japan, but recent records, including one near Tauyskaya Bay in the northern part of the Okhotsk Sea (Chereshnev and Nazarkin 2002 [ref. 26470]), indicate *A. japonicus* may not be particularly rare in more northern waters. The record from the Aleutian Islands is the only one east of the Kuril Islands (see discussion in Mecklenburg et al. 2002:792, 794 [ref. 25968]).

### Genus *Trichodon* Tilesius 1813

*Trichodon* Tilesius (ex Steller) 1813:468 [ref. 13413]. Type species *Trachinus trichodon* Tilesius 1813. Type by subsequent monotypy.

*Chaetichthys* Gistel 1848:xi [ref. 1822]. Type species *Trachinus trichodon* Tilesius 1813. Type by being a replacement name.

REMARKS: Author of genus *Trichodon* is sometimes seen as Steller (e.g., Gill 1862 [ref. 1668]). Tilesius (1813 [ref. 13413]) extensively quotes Steller, so perhaps the genus could be attributed to Steller. See discussion in Jordan and Evermann (1898:2296 [ref. 2445]).

#### *Trichodon trichodon* (Tilesius 1813)

*Trachinus trichodon* Tilesius 1813:466, Pl. 15 (figs. 8–10) [ref. 13413] (Kamchatka, Russia; and Aleutian Is., Alaska). No types known.

*Trachinus gasteropelecus* Tilesius 1813:466 [ref. 13413] (Kamchatka, Russia). No types known.

*Trichodon stelleri* Cuvier 1829:149 [ref. 995] (Kamchatka, Russia; Capes of Cronok and Sechemoetschik, and all over Unalaska I.). Holotype (unique): ZMB 8189 (dry).

*Trichodon lineatus* Ayres 1860:60, Fig. 11 [ref. 17943] (San Francisco, California, U.S.A.). Holotype: apparently lost.

DISTRIBUTION: North Pacific: southern Bering Sea and Commander–Aleutian chain to central California and Okhotsk Sea.

REMARKS: Tilesius (1813) gave three different names or combinations of names for this fish. The list on page 406 gives “*Drachinus trichodon*,” page 466 gives “*Trachinus gasteropelecus* vel *Trichodon stelleri*” with a full description, a footnote on page 473 gives “*Trachinus trichodon*” and a description of the juveniles, and plate 15, figure 8 is labeled “*Trachinus trichodon*.” *Drachinus*, treated here as a misspelling, is sometimes listed as a nomen nudum (e.g., Jordan and Evermann 1898:2297 [ref. 2445]).

*Trichodon stelleri* Cuvier is an unneeded new name for *Trachinus trichodon* of Pallas (1814: 235 [ref. 3351]), which is not an original description, apparently to avoid Strickland tautonymy. The holotype is a Pallas specimen collected from Kamchatka and housed in Berlin (Svetovidov 1978:13 [ref. 6025]). Also described in Cuvier and Valenciennes (1829:154, pl. 57 [ref. 4879]).

### Summary Lists

#### Genus-Group Names of Family Trichodontidae

*Arctoscopus* Jordan & Evermann 1896 = *Arctoscopus* Jordan & Evermann 1896

*Chaetichthys* Gistel 1848 = *Trichodon* Tilesius 1813

*Trichodon* Tilesius 1813 = *Trichodon* Tilesius 1813

#### Incertae Sedis Genus-Group Names

None

**Unavailable Genus-Group Names**

None

**Species-Group Names of Family Trichodontidae**

*gasteropelecus*, *Trachinus* Tilesius 1813 = *Trichodon trichodon* (Tilesius 1813)

*hachirogatensis*, *Arctoscopus japonicus* Hatai 1955 = *Arctoscopus japonicus* (Steindachner 1881)

*japonicus*, *Trichodon* Steindachner 1881 = *Arctoscopus japonicus* (Steindachner 1881)

*lineatus*, *Trichodon* Ayres 1860 = *Trichodon trichodon* (Tilesius 1813)

*stelleri*, *Trichodon* Cuvier 1829 = *Trichodon trichodon* (Tilesius 1813)

*trichodon*, *Trachinus* Tilesius 1813 = *Trichodon trichodon* (Tilesius 1813)

**Incertae Sedis Species-Group Names**

None

**Unavailable Species-Group Names**

None

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