

9. Species Names

GENERAL

- 9.1** In AFS publications, the standard practice is to give the accepted common and scientific names the first time that a species is mentioned in the abstract and text and to use only the common name thereafter. The format for the first mention is as follows:

Gizzard Shad *Dorosoma cepedianum*

(note the absence of parentheses around the scientific name). As indicated in subsequent sections, however, there are numerous exceptions to this practice, depending on the particular species in question, the authority for the names, and the frequency with which the names are used.

Most common names of fishes are now capitalized (see section 9.7 for further information).

- 9.2** References to a genus that has already been mentioned may be abbreviated unless they occur at the beginning of a sentence or there is a possibility of confusion (e.g., two or more genera beginning with the same letter):

Threadfin Shad *D. petenense*

- 9.3** Where appropriate, genus and family names may be used in lieu of species names:

Lepomis spp. in the genus *Micropterus* ictalurids pikes (family Esocidae)

Note that the abbreviation “sp.” refers to a single (unidentified) species within a genus, the abbreviation “spp.” to two or more species within a genus.

More general references to living organisms do not require scientific names:

coldwater fishes benthic invertebrates

- 9.4** As a rule, the full common name should be given at each use:

Coho Salmon *not* Coho

However, if the name is long or used frequently and there is no possibility of confusion, it may be shortened after the first use in each paragraph:

trout [for Westslope Cutthroat Trout]

Alternatively, the general term “fish” may be used in such cases.

9.5 If the first mention of a species (apart from any in the abstract) occurs in a table or figure, the scientific name should be given there and not repeated in the body of the text, and vice versa. However, for the sake of completeness, a scientific name that has previously been given in the text may be repeated in a table when the scientific names of other species are first given in that table.

9.6 Scientific names should not be used adjectively unless the alternative is cumbersome:

populations of Chinook Salmon *Oncorhynchus tshawytscha*

not Chinook Salmon *Oncorhynchus tshawytscha* populations

but Chinook Salmon *Oncorhynchus tshawytscha* fry

9.7 Following the usage in the 7th edition of *Common and Scientific Names of Fishes from the United States, Canada, and Mexico* (AFS Special Publication 34; 2013), new rules apply to the capitalization of species names.

Capitalize

- the common names of all fish species, including those not in *Common and Scientific Names* and other AFS taxonomic publications
- the common names of subspecies (e.g., Lahontan Cutthroat Trout)

Do not capitalize

- the names of life history variants (e.g., steelhead) and hybrids (e.g., saugeye)
- the common names of nonfish species, even if they appear in an AFS taxonomic publication
- common names that refer to groups of related species (e.g., Pacific salmon, darters)
- the common portions of names shared by two or more species when they are mentioned as a group (e.g., Gizzard and Threadfin shads [see section 2.12])

Common names that appear in references should be capitalized if they meet the current criteria for capitalization—even if they were not capitalized in the original publication.

NAMES OF FISH AND OTHER AQUATIC ANIMALS

Species in AFS's *Names of Fishes*

9.8 AFS is the recognized authority on the names of fishes and a few other aquatic species that are indigenous to North America. The currently accepted names of these species are given in the 7th edition of *Common and Scientific Names of Fishes from the United States, Canada, and Mexico*. For species covered by that publication (including exotic species),

- Use the accepted common and scientific names in the abstract and text as indicated in section 9.1; use only the common name in the title
- Use alternative names only if the names committee has endorsed them in the main listings or the notes

Species in Other AFS Taxonomic Publications

9.9 AFS also publishes lists of the names of species for which it is not the primary authority, the most important of which is *World Fishes Important to North Americans* (Special Publication 21). For species covered by those publications,

- Scientific names should be given in the title as well as in the abstract and text
- Common names may be included in the title but are not required
- Alternative common and scientific names are permitted

There are two qualifications with respect to the use of alternative names. First, there should be a bridge to the preferred name in *World Fishes*:

Gilthead Seabream (also known as Gilthead Bream) *Sparus auratus*

Second, if an alternative common name is the same as that of another species covered by an AFS publication, the common name should be omitted from the title and abstract and an explanation given in the text:

Whitefish *Coregonus lavaretus* (known as Powan in North America)

Species Covered by Other Sources

9.10 In the case of names of species not covered by AFS publications,

- Scientific names should be included in the title as well as in the abstract and text
- Common names may be used but are not required

Copy editors should use whatever resources are available (e.g., *Marine Mammals of the World* and Internet searches) to verify the name(s) that the author uses and query the author about any discrepancies.

Special Cases

SUBSPECIES

9.11 At first mention, the names of subspecies are presented as follows:

Coastal Cutthroat Trout *Oncorhynchus clarkii clarkii*

(see the AFS publication *Native Trout of Western North America* [Monograph 6; 1992] for guidance on the names of subspecies of trout). As *Names of Fishes* and *World Fishes* do not give common or scientific names for subspecies, authors will be given a fair amount of latitude in this regard.

DIFFERENT LIFE HISTORIES

9.12 Some fish species have more than one common name because of differences in life history. The most familiar variants are steelhead (the anadromous form of Rainbow Trout) and kokanee (the lacustrine form of Sockeye Salmon).

When only one form is mentioned in the paper, it should be presented in the usual way:

steelhead *Oncorhynchus mykiss* kokanee *Oncorhynchus nerka*

When both forms are mentioned, how they are presented depends on which is mentioned first:

Rainbow Trout *Oncorhynchus mykiss* then steelhead (anadromous Rainbow Trout)

steelhead *Oncorhynchus mykiss* (anadromous Rainbow Trout) then Rainbow Trout

Sockeye Salmon *Oncorhynchus nerka* then kokanee (lacustrine Sockeye Salmon)

kokanee *Oncorhynchus nerka* (lacustrine Sockeye Salmon) then Sockeye Salmon

STRAINS, STOCKS, AND RUNS

9.13 Strains are variants that are maintained by culture:

Seneca Lake Trout

As a rule, copy editors should follow the author with respect to such names. When the strain name does not indicate the species in question, however, clarifying information should be given in the title, abstract, and text. For instance, the title of an article about koi (a variant of Common Carp) should refer to “koi carp,” and the

abstract and text should introduce the species by means of a phrase such as “koi, a variant of Common Carp *Cyprinus carpio*” (after which “koi” alone may be used).

Stocks are populations that are managed as a unit. They usually have geographic names:

Chesapeake Bay Striped Bass

If there is any possibility that the stock portion of the name will be considered part of the common name per se, the distinction should be made clear:

Gulf of Mexico population of Atlantic Sturgeon

Runs consist of members of a species that are migrating to spawn in a particular season:

fall-run [*or* fall] Chum Salmon

Copy editors should follow the author with respect to stock and run names unless the names used are unclear.

HYBRIDS

9.14 In the abstract and text, the names of hybrids are presented as follows:

tiger muskellunge (Northern Pike *Esox lucius* × Muskellunge *E. masquinongy*)

the names of the component species being given in alphabetical order by scientific name. When the sex of the parents matters, that should be given as well:

sunshine bass (female White Bass *Morone chrysops* × male Striped Bass *M. saxatilis*)

In titles, the common names of hybrids that appear in *Names of Fishes* may be given without indicating the parent species. In other cases involving species named in *Names of Fishes*, the parent species should be given.

TAXONOMIC AND SYSTEMATICS PAPERS

9.15 Scientific names may be used throughout such papers, including in the title. Common names should be given in parentheses at the first mention of the species or genus. Scientific names may be used in some places and common names in others if this makes sense in the context of the paper (for an example, see R. F. Stearley and G. R. Smith. 1993. Phylogeny of the Pacific trouts and salmon [*Oncorhynchus*] and genera of the family Salmonidae. Transactions of the American Fisheries Society 122:1–33).

NEW SPECIES

- 9.16** In the case of a newly described species, the scientific name must appear in the title and may be used in lieu of the common name throughout. Authors will be requested to provide documentation of the name, and the matter will be referred to the chair of the Committee on Names of Fishes for confirmation.

NOTE ON TILAPIA SPECIES

- 9.17** Although many tilapia species formerly had two scientific names (e.g., *Oreochromis niloticus* or *Tilapia nilotica* for Nile Tilapia, depending on whether the Trewavas or Thys system was used), all tilapia species now have only one:

Nile Tilapia *Oreochromis niloticus* Redbelly Tilapia *Tilapia zillii*

NAMES OF OTHER SPECIES

- 9.18** Whenever possible, provide the full common and scientific names of other species mentioned in AFS publications:

Douglas-fir *Pseudotsuga menziesii* double-crested cormorant *Phalacrocorax auritus*

- 9.19** When there is no common name (as is the case with bacteria and some insects), use the scientific name throughout, abbreviating the genus name after the first use:

Myxobolus cerebralis

When there is no scientific name (as is the case with viruses and cell lines), use the common name or its acronym throughout:

infectious hematopoietic necrosis virus (IHNV)

Chinook Salmon embryo (CHSE-214) cells

Note that the scientific name for Chinook Salmon is not included in the name of the cell line derived from that species.

Daphnia and Brine Shrimp

- 9.20** Two common food items of fish—daphnia and brine shrimp—are often not identified beyond the genus level. At first mention, they should be indicated as follows:

daphnia *Daphnia* spp. brine shrimp *Artemia* spp.

Either the common or scientific name may be used in subsequent mentions as long as the usage is consistent:

daphnia *or* *Daphnia*

brine shrimp *or* *Artemia*

If a particular species with no common name is referred to, its scientific name may be used throughout:

A. salina

PLURALS

Fish

9.21 A comprehensive list of the plurals of fish names used in AFS publications is given in Appendix C. The principles governing the formation of these plurals are as follows:

As in other matters pertaining to spelling, the general authority in this area is *Webster's Third New International Dictionary* (as updated by the current edition of *Merriam-Webster's Collegiate Dictionary*).

The vast majority of fish names form their plurals by adding *s* or *es*, with stem changes where required:

Bluegills (*not* Bluegill) Guppies Ciscoes

This is especially true for compound names:

Walleyes Alewives *but* Yellowtail steelhead

In a few cases, the plural is the same as the singular (note that this is not a complete list):

trout bass salmon grouper

In the following seven cases, more than one plural is acceptable:

Dolly Varden(s) drum(s) kokanee(s) Ruffe(s) sculpin(s) sturgeon(s) tilapia(s)

The usage should be consistent, however.

9.22 When a plural refers to more than one species (as distinct from more than one individual of the same species), it should be formed by adding *s* or *es*:

Rainbow and Brook trouts [i.e., Rainbow Trout and Brook Trout]

Other Taxa

9.23 By and large, the principles given above also pertain to the plurals of taxa other than fish. Authors will be given a little more leeway, however, especially when more than one form is commonly used.