



COPY

6 Dec 93

John R. McKernan, Jr.
Governor

William J. Vail
Commissioner

DE

Bob -
A supportive letter from you
might help with this effort.

Thanks -
Fred

Hope you have a Happy
Holiday Season!

Dr. Robert L.
Managing Ed
American Fishes
5410 Grosvenor
Bethesda, Mary

Dear Dr. Kendall:

A recent article in Trout magazine (Behnke 1993) has prompted me to take action on something which has been on my mind for several years. In the opening paragraphs of his article (photocopy enclosed) Behnke succinctly outlines a controversy over the spelling of the word "char(r)" for the common name of fish of the genus Salvelinus. As a biologist who has made the study of charr a life-long interest I would like to see the American Fisheries Society, and its publication policy, allow the use of either "char" or "charr", at the authors' discretion.

The AFS has been previously approached on this very subject. Morton (1955) (photocopy enclosed), in spite of a very convincing argument, was apparently rebuffed by the Committee on Common Names. Robins et al. (1991) state that the "...Committee aims to develop a...single common name for each species - that reflects broad common usage...". Certainly the spelling of "charr" currently has a much broader range of common usage than does "char". The three most prestigious texts on charr (Balon 1980; Kawanabe et al. 1989; Johnson and Burns 1984) use the "charr" spelling. Excluding AFS publications (which dictate the "char" spelling) most authors, worldwide, now use the double "r" spelling. Jónasson (1992) uses "charr" for the Icelandic fish in Lake Thingvallavatn, the Nordic Journal of Freshwater Research (Anonymous 1992) uses both "char" and "charr" in its articles but the "charr" spelling predominates. Publications by the International Society of Arctic Char Fanatics allow the use of either "char" or "charr", but not both spellings, in the same paper (Hammar 1985).



COPY

John R. McKernan, Jr.
Governor

William J. Vail
Commissioner

DEPARTMENT OF INLAND FISHERIES AND WILDLIFE

Telephone (207) 289-3371

650 State Street
Bangor, Maine 04401

December 6, 1993

Dr. Robert L. Kendall
Managing Editor
American Fisheries Society
5410 Grosvenor Lane, Suite 110
Bethesda, Maryland 20814-2199

Dear Dr. Kendall:

A recent article in Trout magazine (Behnke 1993) has prompted me to take action on something which has been on my mind for several years. In the opening paragraphs of his article (photocopy enclosed) Behnke succinctly outlines a controversy over the spelling of the word "char(r)" for the common name of fish of the genus Salvelinus. As a biologist who has made the study of charr a life-long interest I would like to see the American Fisheries Society, and its publication policy, allow the use of either "char" or "charr", at the authors' discretion.

The AFS has been previously approached on this very subject. Morton (1955) (photocopy enclosed), in spite of a very convincing argument, was apparently rebuffed by the Committee on Common Names. Robins et al. (1991) state that the "...Committee aims to develop a...single common name for each species - that reflects broad common usage...". Certainly the spelling of "charr" currently has a much broader range of common usage than does "char". The three most prestigious texts on charr (Balon 1980; Kawanabe et al. 1989; Johnson and Burns 1984) use the "charr" spelling. Excluding AFS publications (which dictate the "char" spelling) most authors, worldwide, now use the double "r" spelling. Jónasson (1992) uses "charr" for the Icelandic fish in Lake Thingvallavatn, the Nordic Journal of Freshwater Research (Anonymous 1992) uses both "char" and "charr" in its articles but the "charr" spelling predominates. Publications by the International Society of Arctic Char Fanatics allow the use of either "char" or "charr", but not both spellings, in the same paper (Hammar 1985).

The AFS already gives charr authors the latitude to use different common names to describe eastern North American freshwater charr populations (Robins et al. 1991, page 28). There are a number of guidelines which the Committee on Common Names bases its choices (Robins et al. 1991, pages 6-8). Among these are:

Principle #10; "colorful, romantic...distinctive and original names are especially appropriate." What could be more fitting than the "charr" spelling under this definition?

Principle #12; "...names that are widespread and in common use by the public are to be retained..."; this has already been addressed in preceding paragraphs. There is also a local Maine angler who has "CHARR" as his personalized license plate - what could be more common usage by the public than this?

Principle #13; "Adherence to customary English practice is to be preferred...": the "charr" spelling originated in England and is now the preferred spelling by scientists at the Windermere Laboratory (Frost 1965; Mills et al. 1990), by researchers in Scotland (Hartley et al. 1992), Canada (Dempson 1993), and Finland (Partti-Pellinen et al. 1991).

With this preponderance of evidence I petition the Society to allow AFS authors the same professional license as does the ISACF, the Journal of Fish Biology, the Nordic Journal of Freshwater Research and most others who write of this wonderful, diversified fish.

Sincerely yours,

Frederick W. Kircheis

enc. (2)

cc: Joseph S. Nelson
Robert J. Behnke

References

- Anonymous. 1992. Nordic Journal of Freshwater Research. Institute of Freshwater Research, S-178 93 Drottningholm. Sweden.
- Balon, E.K. (ed.) 1980. Charrs, salmonid fishes of the genus Salvelinus. Dr. W. Junk (publ.) The Hague, The Netherlands.
- Behnke, R.J. 1993. The charrs of New England. Trout. 34(4):44-48.
- Dempson, B. 1993. Salinity tolerance of freshwater acclimated, small sized Arctic charr, Salvelinus alpinus from northern Labrador. Journal of Fish Biology. 43:451-462.
- Frost, W.E. 1965. Breeding habits of Windermere charr, Salvelinus willughbii Günther), and their bearing on speciation of these fish. Freshwater Biological Association, The Ferry House, Ambleside. University Printing House. Cambridge.
- Hammar, J. 1985. Proceedings of the third ISACF workshop on Arctic char, 1984. Institute of Freshwater Research. S-170 11 Drottningholm, Sweden. p 4.
- Hartley, S.E., C. McGowan, R.B. Greer, and A.F. Walker. 1992. The genetics of sympatric Arctic charr [Salvelinus alpinus (L.)] populations from Loch Rannoch, Scotland. Journal of Fish Biology. 41:1021-1031.
- Johnson, L. and B. Burns (eds.). 1984. Biology of the Arctic charr: proceedings of the international symposium on the Arctic charr. University of Manitoba Press. Winnipeg.
- Jónasson, P.M. (ed.) 1992. Ecology of oligotrophic, subarctic Thingvallavatn. OIKOS. Denmark.
- Kawanabe, H., F. Yamazaki and D.L.G. Noakes (eds.). 1982. Biology of charrs and masu salmon: proceedings of the international symposium on charrs and masu salmon. Physiology and Ecology, Japan. Special Vol. 1.
- Mills, C.A., S.I. Heaney, C. Butterwick, J.E. Corry and J.M. Elliott. 1990. Lake enrichment and the status of Windermere charr, Salvelinus alpinus(L.). Journal of Fish Biology. 37(Supplement A), 167-174.
- Morton, W.M. 1955. Charr or char - history of a common name for Salvelinus. Science 121 (3155):874-875.

Partti-Pellinen, K.A., K. Elo, T.K. Palva, P. Tuunainen and
M.O.K. Hakumäki. 1991. Mitochondrial DNA variation of
Salvelinus species found in Finland. Journal of Fish
Biology. 39 (supplement A), 87-92.

Robins, C.R. and 6 others. 1991. Common and scientific names of
fishes from the United States and Canada. Fifth Edition.
American Fisheries Society. Bethesda, Maryland.

ABOUT TROUT

Robert J. Behnke

The Charrs of New England

No higher praise can be given to a salmonoid than to say it is a charr" was the opinion of David Starr Jordan, America's most influential authority on fishes of the late nineteenth and early twentieth century. Note that Jordan and I write charr rather than char. This controversy over proper spelling will never be settled except by decree. It is certainly an inconsequential matter that would attract little attention except for the fish in question. Charr have historically generated an aura of mystery, interest, and controversy much out of proportion to their economic importance. I personally prefer charr over char because of its linguistic roots and unambiguity of meaning. The name probably is of Celtic language origin; in Gaelic, *ceara* means a blood red color. Other fishery terms of Celtic origin (via the Scotch) are *redd* (the nest of a salmonid fish) and *parr* (a juvenile Atlantic salmon). Note that if the second "d" or "r" is removed, pronunciation doesn't change, but the precision of meaning is lost. A char-broil restaurant doesn't serve broiled charr and

if you char meat you make it black, not red.

When is a trout a charr? The most concise definition of charr (or char, the "preferred" dictionary spelling) is a fish of the genus *Salvelinus*. In the American Fisheries Society's "Common and scientific names of fishes from the United States and Canada," five species of the genus *Salvelinus* are listed; their common names are: Arctic char (spelling by AFS decree), bull trout, brook trout, Dolly Varden, and lake trout. There is only one "official" charr (or char) among the five North American species of *Salvelinus* according to the American Fisheries Society. This current usage reflects the fact that the first English speaking settlers of North America were probably unaware of a fish called "charre" (in seventeenth century England). They were familiar with the brown trout, a species ubiquitously distributed in the British Isles and Europe, so the charr they encountered in North America became "trout," a precedent still followed. Izaak Walton never saw a charr but he knew of this elegant, rare fish because some

fisherman at Lake Windermere learned to catch and sell them. By baiting a small hook with a bait such as a maggot and sinking it to the bottom of the lake, many charr could be caught in Lake Windermere and neighboring lakes. These were pickled and sealed in a pot to be sold at high prices to a select clientele. In English history, charre, charr, or char have considerable esteem as a rare, beautiful and mysterious fish.

There is considerable variation in charr from lake to lake in Britain and northern Europe. This led to the naming of many species (15 species were named for the charr of England and Ireland alone). In modern times, the Arctic charr, *Salvelinus alpinus*, is considered to include the charrs of Europe, Iceland, Greenland, Siberia, and North America (except for Dolly Varden, brook trout, bull trout, and lake trout in North America and Dolly Varden and other species of charr from the Chukotsk Peninsula southward in the Far East). There is such great variation in size, coloration, life history, and genetics of *S. alpinus* throughout the Holarctic region, that it is often referred to as the *S. alpinus* species complex (which means no one knows how many species and subspecies actually exist under the name *alpinus*). Thus, a notation for a footnote is given after "Arctic char" in the American Fisheries Society's list of common and scientific names. The footnote states that "Sunapee trout, blueback trout, and Quebec red trout are regarded by some authors as species distinct from the Arctic char." By revising three formerly recognized species of "trout" into the highly inclusive species *S. alpinus*, we transform three trout into one charr. If nothing else, this ambiguity of common names does illustrate the importance of scientific names for increased precision of definition and intent. The mention of Sunapee trout, blueback trout, and Quebec red trout offers an opportunity to get off an esoteric discourse on the peculiarities of fish names and get into the intended

Charr or Char—History of a Common Name for *Salvelinus*

The increasingly popular usage of the term *char* or *charr* as a distinctive and universal English name for those fishes belonging to the genus *Salvelinus* is very encouraging. Such increased usage tends to restrict the term *trout* to the genus *Salmo* where it rightfully belongs. During a rather intensive study of the literature on this interesting group of fishes over the past decade, I found the differential spelling of the term puzzling. Although both spellings commonly appear in fishery literature, with few exceptions individual ichthyologists have confined themselves to consistent use of one form or the other. I have been unable to find any published reason for such individual preference, although there is considerable evidence to show that since the turn of the century most American writers have followed Jordan's preference for *charr*, and most British and European writers have followed Regan's preference for *char*.

I have become aware of a steadily increasing usage of the single *r* by a rather militant group of fishery writers in both scientific and popular publications. This trend probably reached its climax in 1951 when the Committee on Common Names of the American Fisheries Society reversed its 1948 approval of *charr* and favored *char* [*Trans. Am. Fisheries Soc.* 81, 326 (1952)]. It is unfortunate that the committee took a definite stand in favor of one form over the other, because this action, in effect, made it practically impossible to publish in an American fishery periodical a manuscript using the double *r*. In my opinion, which I submitted to the committee in writing, if the committee felt it must take a stand, the bulk of evidence seemed to indicate that *charr* was the better spelling. Correct spelling in English is based upon common or popular use over a long period of time, and many words have two acceptable spellings. When one of these spellings has a specific meaning, it should be favored for that one particular connotation.

The etymology of the word is in doubt. The Oxford Dictionary (1893) states:

Char . . . Forms: 7-chare; 7-8 charr; 8 char. (Known in books only since 17th century; but may have been in local use long before. Etymology unknown; possibly a Celtic origin; Gael. *ceara* red, blood-coloured, *cear* blood; also the Welsh name *torgoch* red-bellied.) A small fish (*Salmo salvelinus*) of the trout kind. . . .

Webster's New International Dictionary (1934) says:

Char, n; pl. *char* (collective) or *chars*. Also *charr*. (Gaelic *ceara* lit., red, blood-colored; French *cear*, blood; From its red belly.) Any trout of the genus *Salvelinus*.

Other meanings given for *char* as a noun include: (i) short for charwoman (scrubwoman); a chore; (ii) a chariot; cart; (iii) a charred substance; charcoal (as a verb, the word is a synonym for scorch); (iv) a sandbank; a bar of sand or mud. Additional meanings, most of them now obsolete, will be found in the Oxford Dictionary under *char*.

Although the Oxford Dictionary and Webster's New International Dictionary place *char* in the preferred spelling position, *charr* is used only when referring to the fish, whereas *char* is given many other meanings. At least two other monosyllabic words ending in double consonants are in common usage among ichthyologists. *Parr* (a few early English papers used *par*), a young salmon before it has gone to the sea, and *redd*, the nest or depression in gravel into which salmon eggs are deposited. However, *charr*, a fish of the genus *Salvelinus*, is given secondary position to *char* in the afore-mentioned references, and it may not appear at all in some newer references.

Although both forms of spelling can be based on early popular use, the term *char* does not appear in professional literature until 1865 (nearly 2 centuries after Willoughby, in one of the earliest scientific papers on fishes, in 1686 had used the double *rr* in his *Historia Piscium*) when Jonathan Couch introduced *char* to the scientific literature of England [*History of the Fishes of the British Islands* (1865), vol. IV, p. 253]. George Suckley introduced the term to American scientific literature in 1874 [*U.S. Comm. Fish and Fisheries*, pt. II, *Rept. of Commissioner for 1872 and 1873*, appendix B, pp. 91-161]. The only author I know of who changed from one form to the other (without the influence of coauthors) was Sir Francis Day, who used *charr* in his works from 1880 to 1884 and *char* in 1887.

A survey of professional ichthyological papers that published prior to 1951 reveals that of 76 authors who have used the term, 42 preferred *charr* (21 of these were American authors), and 34 preferred *char* (only eight of whom were American authors). Practically all articles published in English by Swedish, Norwegian, Danish, English, Canadian, Australian, and New Zealand writers since 1900 tend to spell the term *char*, owing, no doubt, to its preferred position in recent editions of such references as the Oxford Dictionary, Webster's Dictionary, and the Encyclopedia Britannica. This preferred position in these references stems from the contributions of C. Tate Regan and Day. Since 1900 practically all American ichthyologists have followed the precedent set by Jordan who used *charr* in his papers.

With a middle name such as his own, David Starr Jordan was well aware of a fundamental reason for spelling the term *charr*. It has long been, and still is, customary in English usage that, whenever a common monosyllabic word such as *cap* or *cat* is used as a collective or proper noun naming a particular person, place, or thing, or group of them, the consonant is doubled as in *Capp* or *Catt*. For example, of the 23 names listed in the Portland, Oregon, telephone directory for June 1950 ending in *r* or *rr*, 20 representing 327 individuals, spelled their names with a double *r*, whereas only three, representing five individuals, were found using the single *r*.

WILLIAM MARKHAM MORTON

U.S. Fish and Wildlife Service,
Portland, Oregon

4 April 1955.

Colorado State University

Department of Fishery and
Wildlife Biology
Fort Collins, Colorado 80523
(303) 491-5020
FAX (303) 491 5091

December 13, 1993

Dr. Robert L. Kendall
American Fisheries Society
5410 Grosvenor Lane, Suite 110
Bethesda, MD 20814-2199

Dear Bob:

Fred Kircheis, picking up Mark Morton's torch for the spelling charr, requested my endorsement. As with the i vs. ii ending of scientific names and AFS' "programming," I'm not about to lead a crusade for linguistic correctness, but, as I state in my recent charr article, I do prefer charr as more correct for fishes of the genus Salvelinus.

First, I would recognize the great service that Reeve Bailey and Dick Robbins have given to AFS for their devoted work handling all the problems of common and scientific names. No doubt forceful, often arbitrary decisions are necessary to maintain order. Although many people have served on the names committee, the show was run by Dick and Reeve for many years, often with displays of intellectual arrogance that I would call "hubris." When confronted with a problem on which precedent had already been set, their reaction was to dig in and circle the wagons (exemplified by the tortuous reasoning to reject ii endings, when the rules of nomenclature state only the original author could make a change).

I recall communicating with Joe Nelson about some nomenclature problems that were not likely to be corrected during Reeve's tenure. I found numerous errors in the AFS International Checklist under Salmonidae, not the least of which was a comment that Salmo platycephalus, a species I named from Turkey, was probably only a form of S. trutta and not a valid species. Obviously none of the committee bothered to read my original description nor ask Gerry Smith for his opinion (Smith and Stearly found the distinctions in platycephalus sufficient from trutta to remove it from the genus Salmo), before passing judgement.

Dr. Robert L. Kendall
December 13, 1993
Page 2

Fred's suggestion that alternate spellings be allowed is a good one. If Bob McDowall wants to write clarkii or gairdnerii in an AFS publication, he should also be allowed to do so, perhaps with a footnote citing his publication on the matter.

Sincerely,

Robert J. Behnke
Professor

/jt

cc: J. Nelson
F. Kircheis

INLAND FISHERIES AND WILDLIFE
FISHERIES RESEARCH OFFICE
650 STATE STREET
BANGOR, MAINE 04401-5654



CHARR

First Class Mail

Robert J. Behnke
Dept. of Fish & Wildlife Biology
Colorado State University
Fort Collins, COL 80523

First Class Mail