**Supplemental Table S1**. Observations of salmonids in fresh waters of California between 1850 and 1895 as described in Evermann and Clarke 1931 and references cited therein. Current taxonomy based on Behnke 1992. Museum numbers in bold still exist in the U.S. National Museum (USNM) or California Academy of Sciences (CAS) collection; those in plain text do not.[[1]](#endnote-1) Papers from Evermann and Clark that summarize range information based on the work of others, but that do not provide unique collection localities, were omitted.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Original ID | Evermann & Clark ID | Current ID | Year | Location | Source | Collector  | Museum |
| 1 | *Salmo iridea* | *Salmo irideus* | *Oncorhynchus mykiss irideus* | 1855 | San Leandro Creek (Alameda Co.) | Gibbons 1855 | Nevins | --- |
| 2 | *Salmo rivularis* | *Salmo irideus* | *Oncorhynchus mykiss irideus* | 1855 | Martinez (Contra Costa Co.) | Ayers 1855, Girard 1856 | Winslow | --- |
| 3 | *Salar iridea* | *Salmo irideus* | *Oncorhynchus mykiss irideus* | 1855 | San Mateo Creek (San Mateo Co.) | Girard 1856a, 1858 | R.D. Cutts | **USNM-597** |
| 4 | *Salar iridea* | *Salmo irideus* | *Oncorhynchus mykiss irideus* | 1855 | Petaluma (Sonoma Co.) | Girard 1856a, 1858 | E. Samuels | **USNM-598** |
| 5 | *Fario gairdneri* | *Salmo gairdneri* | *Oncorhynchus mykiss newberrii* | 1855 | Klamath River, OR[[2]](#endnote-2) | Girard 1856a, 1857, 1858 | R.S. Williamson[[3]](#endnote-3) | **USNM-578** |
| 6 | *Fario stellatus* | not noted | *Oncorhynchus clarkii clarkii*[[4]](#endnote-4) | 1853 | Humboldt Bay[[5]](#endnote-5) (Humboldt Co.) | Girard 1856a, 1858 | W.P. Trowbridge | **USNM-585** |
| 7 | *Salar iridea* | *Salmo irideus* | *Oncorhynchus mykiss irideus* | 1855 | Chico Creek (Butte Co.) | Girard 1857, 1858 | J.S. Newberry[[6]](#endnote-6) | **USNM-594** |
| 8 | *Salar iridea* | *Salmo irideus* | *Oncorhynchus mykiss irideus* | 1856 | San Francisco (San Francisco Co.?) | Girard, 1857, 1858 | W.O. Ayres | **USNM-599** |
| 9 | *Salar iridea* | *Salmo irideus* | *Oncorhynchus mykiss irideus* | 1854 | Humboldt Bay5 (Humboldt Co.) | Girard 1856a, 1858, 1859a | W.P. Trowbridge | **USNM-596** |
| 10 | *Salmo iridea* | *Salmo henshawi*[[7]](#endnote-7) | *Oncorhynchus mykiss irideus* | ca 1870 | Merced River (Mariposa Co.) | Caton 1870 | J.D. Caton | --- |
| 11 | *Salmo mendocinensis*  | *Salmo gairdneri* | *Oncorhynchus mykiss irideus* | ca 1876 | Mendocino Co. | Gibbons 1876 | J.H. Clarke | --- |
| 12 | *Salmo irideus* | *Salmo gilberti* | *Oncorhynchus mykiss gilberti* or *Oncorhynchus mykiss aguabonita*[[8]](#endnote-8) | 1875 | Near Mt. Whitney (Tulare Co.) | Jordan & Henshaw 1878 | H.W. Henshaw | USNM-17104 |
| 13 | *Salmo irideus* | *Salmo irideus* | *Oncorhynchus mykiss irideus* | 1876[[9]](#endnote-9) | Ojai Creek (Ventura Co.) | Jordan & Henshaw 1878 | H.W. Henshaw | USNM-17096 |
| 14 | *Salmo tsuppitch* | *Salmo gibbsi* | *Oncorhynchus mykiss stonei* | 1877 | Pit River trib. (Modoc Co.) | Jordan & Henshaw 1878 | H.W. Henshaw | USNM-161[[10]](#endnote-10) |
| 15 | *Salmo tsuppitch* | *Salmo gibbsi* | *Oncorhynchus clarkii henshawi* | 1876 | Lake Tahoe (Placer/El Dorado Co.) | Jordan & Henshaw 1878 | H.W. Henshaw | ---[[11]](#endnote-11) |
| 16 | *Salmo tsuppitch* | *Salmo gibbsi* | *Oncorhynchus mykiss gilberti?*[[12]](#endnote-12) | 1875 | Kern River (Tulare Co.) | Jordan & Henshaw 1878 | H.W. Henshaw | **USNM-17087**? |
| 17 | *Salmo henshawi* | *Salmo henshawi* | *Oncorhynchus clarkii henshawi*[[13]](#endnote-13) | 1876 | Lake Tahoe (Placer/El Dorado Co.) | Jordan & Henshaw 1878 | H.W. Henshaw | **USNM-17086[[14]](#endnote-14)** |
| 18 | *Salmo henshawi* | *Salmo shasta* | *Oncorhynchus mykiss stonei* | 1870s18741877 | McCloud River (Shasta Co.) | Jordan & Henshaw 1878 | L. Stone | USNM-20832[[15]](#endnote-15)**USNM-15516?****USNM-22336?** |
| 19 | *Salmo pleuriticus* | *Salmo aqua-bonita* | *Oncorhynchus mykiss aguabonita* | 1875 or 1876 | S. Fork Kern River (Tulare Co.) | Jordan & Henshaw 1878 | H.W. Henshaw | USNM-17107[[16]](#endnote-16)**USNM-17089**[[17]](#endnote-17) |
| 20 | *Salmo irideus* | *Salmo irideus* | *Oncorhynchus mykiss* sp.[[18]](#endnote-18) | 1877-1880 | McCloud River (Shasta Co.) | Bean 1880 | L. Stone | **USNM-22338**[[19]](#endnote-19) |
| 21 | *Salvelinus bairdii* | *Salvelinus malma spectabilis* | *Salvelinus confluentus* | 1877-1880 | McCloud River (Shasta Co.) | Bean 1880 | L. StoneL. StoneL. Stone | **USNM-27820**[[20]](#endnote-20)**USNM-22452****USNM-22451** |
| 22 | *Oncorhynchus quinnat*  | *Oncorhynchus tshawytscha* | *Oncorhynchus tshawytscha* | 1877-1880 | McCloud River (Shasta Co.) | Bean 1880 | L. Stone | **USNM-22335**[[21]](#endnote-21) |
| 23 | *Salmo purpuratus henshawi* | *Salmo henshawi* | *Oncorhynchus clarkii henshawi* | ca 1880[[22]](#endnote-22) | Lake Tahoe (Placer/El Dorado Co.) | Jordan & Jouy 1881 | Received from D.S. Jordan | USNM-24139 |
| 24 | *Salmo irideus* | *Salmo irideus* | *Oncorhynchus mykiss irideus* | 1880[[23]](#endnote-23) | San Luis Rey River (San Diego Co.) | Jordan & Jouy 1881 | D.S. Jordan | **USNM-26795** |
| 25 | *Salmo irideus* | *Salmo irideus* | *Oncorhynchus mykiss irideus* | ca 1880[[24]](#endnote-24) | Sacramento River (county uncertain) | Jordan & Jouy 1881 | Received from D.S. Jordan | USNM-27207 |
| 26 | *Salmo irideus* | *[[25]](#endnote-25)* | *Oncorhynchus mykiss irideus* | 1880 | Monterey Bay (Monterey/Santa Cruz Co.) | Jordan & Jouy 1881 | D.S. Jordan | **USNM-27356** |
| 27 | *Oncorhynchus keta* | *Oncorhynchus keta* | *Oncorhynchus keta* | ca 1880 | San Francisco[[26]](#endnote-26) (San Francisco Co.) | Jordan & Jouy 1881 | Received from D.S. Jordan  | USNM-27220[[27]](#endnote-27) |
| 28 | *Oncorhynchus kisutch* | *Oncorhynchus kisutch* | *Oncorhynchus kisutch* | ca 1880 | Sacramento River (county uncertain) | Jordan & Jouy 1881 | Received from D.S. Jordan | USNM-27250[[28]](#endnote-28) |
| 29 | *Oncorhynchus chouicha* | *Oncorhynchus tshawytscha* | *Oncorhynchus tshawytscha* | 1880 | Sacramento River (county uncertain) | Jordan & Jouy 1881 | Received from D.S. Jordan | **USNM-27237**[[29]](#endnote-29) |
| 30 | *Oncorhynchus chouicha* | *Oncorhynchus tshawytscha* | *Oncorhynchus tshawytscha* | 1880ca 18801880 | Monterey (marine) (Monterey/Santa Cruz Co.) | Jordan & Jouy 1881 | D.S. Jordan | **USNM-27039**USNM-27067[[30]](#endnote-30)**USNM-27217** |
| 31 | *Salvelinus malma* | *Salvelinus malma spectabilis* | *Salvelinus confluentus* | not given | McCloud River (Shasta Co.) | Campbell 1882 | J.B. Campbell | --- |
| 32 | *Salmo irideus* | *Salmo shasta* | *Oncorhynchus mykiss stonei*[[31]](#endnote-31) | not given | McCloud River (Shasta Co.) | Campbell 1882 | J.B. Campbell | --- |
| 33 | *Salmo irideus*  | *Salmo irideus* | *Oncorhynchus mykiss irideus* | ca 1889 | Allen Springs (Lake Co.) | Eigenmann & Eigenmann 1889a | D. Cleveland | ---[[32]](#endnote-32) |
| 34 | *Oncorhynchus kisutch* | *Oncorhynchus kisutch* | *Oncorhynchus kisutch* (juve.) | 1890 | Paper Mill (=Lagunitas) Creek (Marin Co.) | Eigenmann 1890[[33]](#endnote-33) | C. Ohm | --- |
| 35 | *Oncorhynchus tchawytcha* | *Oncorhynchus tschawytscha* | *Oncorhynchus tshawytscha* (juve.) | 1890 | Mare Island, Sacramento R. (Solano Co.) | Eigenmann 1890 | C.H. Eigenmann | --- |
| 36 | *Salmo mykiss henshawi* | *Salmo henshawi* | *Oncorhynchus clarkii henshawi* | 1889 | Lake Tahoe (Placer/El Dorado Co.) | Eigenmann & Eigenmann 1891 | L. Belding | --- |
| 37 | *Salmo mykiss agua-bonita* | not given | *Oncorhynchus mykiss aguabonita* |  | Cottonwood Creek[[34]](#endnote-34) (Inyo Co.) | Jordan 1892 | A.C. Harvey | --- |
| 38 | *Salmo irideus* | *Salmo whitei*? | *Oncorhynchus mykiss irideus* | 1891 | Kings River Canyon (Fresno Co.) | Gilbert 1893 | A.K. Fisher | --- |
| 39 | *Salmo mykiss agua-bonita* | *Salmo agua-bonita* | *Oncorhynchus mykiss aguabonita* | 1891 | Whitney Creek (Tulare Co.) | Gilbert 1893 | V. Bailey | **USNM-46119[[35]](#endnote-35)** |
| 40 | *Salmo mykiss agua-bonita* | *Salmo agua-bonita* | *Oncorhynchus mykiss aguabonita* | 1891 | South Fork Kern River (Tulare Co.) | Gilbert 1893 | F. Stephens | **USNM-46121**[[36]](#endnote-36) |
| 41 | *Salmo mykiss agua-bonita* | *Salmo agua-bonita* | *Oncorhynchus mykiss aguabonita* | 1891 | Cottonwood Creek (introduced) (Inyo Co.) | Gilbert 1893 | B.H. Dutcher | **USNM-46120**[[37]](#endnote-37) |
| 42 | *Salmo gairdneri stonei[[38]](#endnote-38)* | *Salmo stonei* | *Oncorhynchus mykiss stonei* | 1893 | McCloud River (Shasta Co.) | Jordan 1894a, 1894b, 1894c | L. Stone | **CAS:SU 10900** |
| 43 | *Salmo gairdneri shasta* | *Salmo shasta* | *Oncorhynchus mykiss stonei* | 1893 | McCloud River (Shasta Co.) | Jordan 1894b | L. Stone | **CAS:SU 10901**[[39]](#endnote-39)**CAS:SU 10902****CAS:SU 10903****CAS:SU 10904****CAS:SU 10905****CAS:SU 10906** |
| 44 | *Salmo gairdneri gilberti* | *Salmo gilberti* | *Oncorhynchus mykiss gilberti* | 1893 | Kern River (Tulare Co.) | Jordan 1894a, 1894b | C.H. Gilbert | **CAS:SU 11509**[[40]](#endnote-40) |
| 45 | *Salmo mykiss irideus* | *Salmo irideus* | *Oncorhynchus mykiss irideus* | ca 1894 | Clear Lake (Lake Co.) | Jordan & Gilbert 1894 | D.S. Jordan & C.H. Gilbert | --- |

1. Some numbers originally entered into the collection ledger and resulting publications were later changed. [↑](#endnote-ref-1)
2. Although Evermann and Clark (1931) included this specimen in their list of California localities, the specimen appears to have been collected in the upper Klamath Basin in Klamath County, Oregon (see collection record for USNM-578). [↑](#endnote-ref-2)
3. The USNM ledger indicates that the specimen was collected by Williamson and prepared by J.S. Newberry. [↑](#endnote-ref-3)
4. It appears Trowbridge collected both *Oncorhynchus mykiss irideus* and *Oncorhynchus clarkii clarkii*, though given the substantial overlap in diagnostic characteristics considered important at the time, there remains some possibility that one or the other species was misidentified. [↑](#endnote-ref-4)
5. Possibly marine or estuarine. [↑](#endnote-ref-5)
6. Girard (1857) listed Ayers as the collector, but USNM database and Girard (1858) lists Newberry. [↑](#endnote-ref-6)
7. Evermann and Clark (1931) believed this to be *Salmo henshawi.* However, unless transplanted, this was most likely *Oncorhynchus mykiss iridea* [↑](#endnote-ref-7)
8. Although *Oncorhynchus mykiss gilberti* is the current name given to trout native to the Kern River and Little Kern River basins, Henshaw’s narrative description of the habitat of his *Salmo irideus* includes “tributaries of the South Fork of the Kern River” and so certainly includes *Oncorhynchus mykiss aguabonita*. The imprecise collection locality of “near Mt. Whitney” could refer to both the upper Kern River and the South Fork Kern River basins and so does not allow discrimination between the two subspecies. [↑](#endnote-ref-8)
9. Jordan and Henshaw (1878) indicate that the specimen was collected in 1875; however, the USNM ledger indicates a collection date of July 1876. [↑](#endnote-ref-9)
10. Jordan and Henshaw (1878) indicate the specimen was USNM-161; however, the USNM ledger entry does not match the species or location. [↑](#endnote-ref-10)
11. Jordan and Henshaw (1878) do not list a USNM museum number for the purported Lake Tahoe specimen of *Salmo tsuppitch*. [↑](#endnote-ref-11)
12. Jordan and Henshaw (1878) grouped specimens of redband trout from the Pit River, Lahontan Cutthroat trout from Lake Tahoe, and Kern River/Little Kern River golden trout into a single species, *Salmo tsuppitch.* This confusion was based on the fact that characteristics Jordan used to discriminate between rainbow and cutthroat trouts (e.g., scale counts, coloration on the lower jaw, and presence/absence of basibranchial teeth) are not definitive. Specimen USNM-17087 is listed in the USNM electronic database as *Salmo clarki henshawi*; however, the collection record indicates the specimen was collected in the North Fork Kern River, which is either the mainstem Kern or the Little Kern River; hence, this is likely *Oncorhynchus mykiss gilberti.* [↑](#endnote-ref-12)
13. Jordan and Henshaw (1878) described two species of trout in Lake Tahoe, the “Black Trout of Lake Tahoe” and the “Silver Trout of Lake Tahoe.” These were apparently all Lahontan cutthroat trout, as that was the only salmonids native to the Lake Tahoe basin. The “Silver Trout” was said to also occur in the McCloud River; however, this was again most likely a redband trout. Behnke (1992) notes that there is substantial variation in the characteristics of redband trouts in various tributaries of the McCloud and Pit rivers, thus the assignment of *stonei* as a subspecific name to all redband populations of the northern Sacramento Valley may be inappropriate. [↑](#endnote-ref-13)
14. Specimen USNM-17085 also appears to be associated with this record, though is not mentioned in Jordan and Henshaw (1878). [↑](#endnote-ref-14)
15. Specimen USNM-20832 is identified as *Salmo henshawi* in Jordan and Henshaw (1878) but no longer exists in the USNM database. The USNM ledger indicates specimen USNM-20832 was a *Salmo quinnat* from the McCloud River. Two other specimens in the USNM database (NMNS-15516 and USNM-22336) are listed as *Salmo gairdneri stonei* collected by Livingstone Stone in 1874 and 1877, respectively. If Jordan and Henshaw (1878) believed they were *Salmo henshawi*, they may account for this record. [↑](#endnote-ref-15)
16. Jordan and Henshaw (1878) identified specimen USNM-17107 as *Salmo pleuriticus* collected from the South Fork Kern River collected in 1875. The USNM ledger and electronic database both indicate specimen USNM 17107 is *Catostumus araeopus* from the same locality and date. [↑](#endnote-ref-16)
17. Specimen USNM-17089 is currently identified as *Salmo aguabonita*, though in the original USNM ledger it was entered as *Salar pleuriticus*, collected in the South Fork Kern River in September 1876. Jordan and Henshaw (1878) were under the mistaken impression that South Fork Kern Golden trout and Cutthroat Trout from the Rio Grande basin were the same species. [↑](#endnote-ref-17)
18. Specimen USNM-22338 is currently as *Salmo gairdneri*, but was entered in the USNM ledger as *Salmo irideus.* Based on the collection location, it could conceivably be either *Oncorhynchus mykiss stonei* or *O. mykiss irideus*. [↑](#endnote-ref-18)
19. Bean (1880) lists 37 USNM register numbers as being *Salmo irideus* that from the McCloud River that were distributed by the National Museum to other localities (USNM 22336, 22338, 22353, 22354, 22356, 22359, 22361, 22419-22432, 22454-22460, 22462-2465, 22470, 22471, 22474-22476). Only one specimen remains in the current collection (USNM-22338)*.* These are assumed to be the records used by Evermann and Clark (1931) in their list. [↑](#endnote-ref-19)
20. Bean (1880) also lists three USNM register numbers as *Salvelinus bairdii* that were distributed by the National Museum to other localities (USNM 15533, 22337, 22469). These specimens no longer exist in the USNM database but are listed in the USNM ledger as *Salvelinus bairdii* (15533) or *Salmo bairdii* (22337, 22469). [↑](#endnote-ref-20)
21. Bean (1880) lists 32 USNM register numbers as being *Oncorhynchus quinnat* from the McCloud River that were distributed by the National Museum to other localities (22335, 22340, 22345, 22393-22396, 22410-22418, 22433-22438, 22440, 22441, 22444, 22445, 22447-22449, 22481-22483). One specimen remains in the current collection (USNM-22335). [↑](#endnote-ref-21)
22. USNM ledger does not list a collection date, but indicates it was received from D.S. Jordan and entered into the ledger on 12 January 1880. [↑](#endnote-ref-22)
23. USNM ledger does not list a collection date, but indicates it was received from D.S. Jordan and entered into the ledger on 22 December 1880. [↑](#endnote-ref-23)
24. USNM ledger is ambiguous regarding collection date (1880 is listed at top of column and appears to apply to all entries on the page). The ledger indicates it was received from D.S. Jordan, entered into the ledger on 4 January 1881, and thus was almost certainly from the 1880 Pacific Coast Expedition. [↑](#endnote-ref-24)
25. Specimen not listed in Evermann and Clark (1931) though it is in Jordan and Jouy’s (1881) list. Museum lists it as captured in marine waters, which may explain its absence from Evermann and Clark’s list. [↑](#endnote-ref-25)
26. Possibly marine origin. [↑](#endnote-ref-26)
27. USNM ledger is ambiguous regarding collection date (1880 is listed at top of column and appears to apply to all entries on the page) and whether the specimen was from fresh or salt water. The ledger indicates it was received from D.S. Jordan, entered into the ledger on 4 January 1881, and thus was almost certainly from the 1880 Pacific Coast Expedition. [↑](#endnote-ref-27)
28. USNM ledger is ambiguous regarding collection date (1880 is listed at top of column and appears to apply to all entries on the page). The ledger indicates it was received from D.S. Jordan, entered into the ledger on 5 January 1881, and thus was almost certainly from the 1880 Pacific Coast Expedition. [↑](#endnote-ref-28)
29. An undated specimen given the number USNM-260986 is also reported as collected by Jordan from the Sacramento River and is shown as “recat. from USNM 27237”. [↑](#endnote-ref-29)
30. USNM ledger is ambiguous regarding collection date (1880 is listed at top of column and appears to apply to all entries on the page) and whether the specimen was from fresh or salt water. The ledger indicates it was received from D.S. Jordan, entered into the ledger on 30 December 1880, and thus was almost certainly from the 1880 Pacific Coast Expedition. [↑](#endnote-ref-30)
31. Campbell described the trout as the “red-sided trout” or “rainbow trout,” from which the editor (Baird) assigned it to *Salmo irideus.*  Most likely this was *O. mykiss stonei*, but there is a possibility it was *O. mykiss irideus*. [↑](#endnote-ref-31)
32. Although the *S. irideus* specimen from Allen springs does not appear to remain in the USNM collection, a cottid identified as *Uranidea semiscabra centropleura* from the same locality and date does still exist (USNM-41919). [↑](#endnote-ref-32)
33. Eigenmann (1890) also discusses other *Oncorhynchus* species; however, the range descriptions appear derived from Jordan’s earlier published descriptions, rather than new observations. [↑](#endnote-ref-33)
34. Jordan (1892a) reported the collection location as Whitney Creek, which was then known as Volcano Creek, but is now known as Golden Trout Creek; however, the specimens were apparently collected from Cottonwood Creek and were the result of a transplanting of fish from elsewhere. Evermann (1905) reported that the source of these fish was “Volcano Creek;” however, in Evermann and Clark (1931), they indicate that the source was a tributary to the South Fork Kern River and suggest these fish differed from those in Volcano Creek. [↑](#endnote-ref-34)
35. USNM-46119 appears to be the specimen collected by V. Bailey from Whitney (=Volcano=Golden Trout) Creek (see Evermann 1905). [↑](#endnote-ref-35)
36. USNM-46121 appears to be the specimen collected by F. Stephens from the South Fork Kern River (see Evermann 1905). [↑](#endnote-ref-36)
37. USNM-46120 appears to be the specimen collected by B.H. Dutcher from Big Cottonwood Creek. These specimens were apparently the result of transfer of fish from Volcano Creek (=Golden Trout Creek) (see Evermann 1905). [↑](#endnote-ref-37)
38. Jordan referred to this species as *Salmo gairdneri stonei* in Jordan 1894b and *Salmo irideus stonei* in Jordan 1894a. [↑](#endnote-ref-38)
39. Although Jordan 1894b did not provide the specimen number, I presume that is the basis for his description based on the sample locality, date, and proximity in the CAS:Stanford collection to the previous specimen, also collected by L. Stone. Note that USNM-131376 has no collection date, but is listed as *Salmo gairdneri shasta* collected in the McCloud River near Baird California and thus may have been taken at the same time. [↑](#endnote-ref-39)
40. Although Jordan 1894b did not provide the specimen number, I presume from the collector, date, and locality that this forms the basis of this record. [↑](#endnote-ref-40)