governing water rights); *Hassell*, 837 P.2d at 166-68 (basing its decision on the separation-of-powers doctrine and a constitutional gift clause nearly identical to Nevada's). As this court stated in *Lawrence*, "[t]he public trust doctrine is . . . not simply common law easily abrogated by legislation." 127 Nev. at 401, 254 P.3d at 613. Rather, it is an "inabrogable attribute of statehood itself." *Hassell*, 837 P.2d at 168; *Ill. Cent. R. Co. v. Illinois*, 146 U.S. 387, 453 (1892) (noting that a state cannot abdicate its duties under the public trust doctrine).

The majority does not tackle these principles head-on, instead attempting a sleight of hand. NRS Chapter 533, the majority argues, has functionally replaced the public trust doctrine because its provisions are "consistent with" the public trust doctrine and "satisfy all of the elements of the dispensation of public trust property that we established in *Lawrence*." Majority op. at 15. The majority further attempts to misdirect that the values the public trust doctrine protects are totally commensurate with the "public interest" as considered in NRS Chapter 533. *See id.* at 21 n.7. In so doing, the majority equates the concepts in error—an appropriation could conceivably be in the public interest while still resulting in unavoidable and unjustified harm to public trust values. *See Audubon*, 658 P.2d at 728. For example, while it could theoretically be in the public interest to allocate water rights to facilitate cattle grazing, increase herd size, and ultimately reduce the price of beef for dinner, if done without regard to the deleterious impacts of unsustainable watering and grazing on Nevada's natural resources, such action could also be entirely inconsistent with public trust principles.

In any case, while it is true that the cited water statutes and public trust doctrine may share and even promote the same core principles, this shared purpose alone "do[es] not override the public trust doctrine or render it superfluous." *Water Use Permit Applications*, 9 P.3d at 445. To the contrary, the public trust doctrine, enforced by a separate and independent judiciary, is one intentionally endowed with flexibility—to consider a multitude of needs and impacts, to encompass more and different protections over this state's water sources, to check the actions by legislative and executive actors for absolute compliance with their fiduciary obligations—that those limited statutory sections cited lack. *See Kootenai*, 671 P.2d at 1095 (noting that "mere compliance by [the State Engineer] with [its] legislative authority is not sufficient to determine if [its] actions comport with the requirements of the public trust doctrine"); *see also* Rebecca LaGrandeur Harms, *Preserving the Common Law Public Trust Doctrine: Maintaining Flexibility in an Era of Increasing Statutes*, 39 Environs: Envtl. L. & Pol'y J., 97, 113 (2015) (recognizing the "unique utility of the public trust doctrine in its original common law form"—"common law doctrine has been able to expand to cover more natural resources and public uses").

Perhaps even more concerning is that the rigid statutory protections the majority would endow with sovereign state functions can be repealed, *see Audubon*, 658 P.2d at 728 n.27 (noting same concern); what of this storied doctrine then? I cannot fathom relocating this long-standing limitation on sovereign authority, *see* Regalia, 108 Ky. L.J. at 28 (discussing purpose of doctrine), to such shaky ground. No doubt the public trust doctrine may "inform [the] interpretation [of NRS Chapter 533], define its permissible 'outer limits,' and justify its existence." *Water Use Permit*

Applications, 9 P.3d at 445. But it cannot be that this state's affirmative fiduciary obligations over certain water sources—obligations supervised by the judiciary and founded on a century of common law, inherent sovereign authority, and the state constitution—are entirely subsumed by a handful of statutes governing the specific duties of an administrative agent.

Indeed, that the public trust doctrine exists as one part of an integrated system of water law that also includes NRS Chapter 533 is the only logical outcome—as Mineral County stated so aptly in its reply brief, the "[i]nclusion of a provision in statutory law does not ensure execution of that provision in satisfaction of the State's public trust duties." And that principle is well-illustrated here. The public trust doctrine demands that some responsible state entity take action to preserve the public value of Walker Lake, yet all parties recognize its continuing decline despite the State Engineer's statutory obligations. The doctrine does not permit the Walker River Decree Court to simply stand by and watch the ruination of public resources, but what enforcement avenue has the majority left here? Simply put, if the doctrine does not empower the Walker River Decree Court's independent supervision of the State Engineer's management of rights in Basin waters, it is illusory; the majority's recognition of its history and scope, mere lip service.

Unsurprisingly then, and as many cases cited above suggest, courts in other states have held that the public trust doctrine is one part of an integrated system of water laws, which system also includes, in part, a statutory system of appropriative water rights. *See, e.g.*, *Audubon*, 658 P.2d at 732; *Parks v. Cooper*, 676 N.W.2d 823, 838 (S.D. 2004) (aligning South Dakota's jurisprudence with other jurisdictions'). And despite the interconnectedness of the doctrine and appropriative systems, these foreign

courts have still recognized that the public trust doctrine exists "independently of any statutory [water source] protections supplied by the legislature." *See Water Use Permit Applications*, 9 P.3d at 444 (collecting cases); *see also Kootenai*, 671 P.2d at 1094; *Hassell*, 837 P.2d at 168; *Cooper*, 676 N.W.2d at 838 (collecting cases).

This court has repeatedly reaffirmed that Nevada looks to the water law of its western sister states to interpret and understand its own. *See Happy Creek*, 135 Nev. at 304, 448 P.3d at 1109. And indeed, this court reviewed and previously approved of the reasoning in some of those cases cited above. *Mineral Cty.*, 117 Nev. at 247 & nn.4-5, 20 P.3d at 808 & nn.4-5 (Rose, J., concurring) (discussing and favorably citing *Audubon*); *Lawrence*, 127 Nev. at 405-06, 254 P.3d at 616 (favorably citing the reasoning in *Hassell*). This court should not easily set aside such analysis, *Miller v. Burk*, 124 Nev. 579, 597, 188 P.3d 1112, 1124 (2008) (stating that, generally, this court "will not overturn [precedent] absent compelling reasons for so doing"), or the well-reasoned decisions underlying the same. But the majority makes no attempt to explain how the principles enunciated in *Audubon*, *Hassell*, and *Kootenai* have become inapplicable in the years since we first highlighted them, citing *Audubon* and *Hassell* only in passing and omitting any mention of *Kootenai*.

C.

Setting aside these considerations of sovereign responsibilities, separation of powers, and stare decisis, the majority points to the importance of "finality" in water-rights determinations. In fact, the majority implicitly holds that this principle outweighs every other already mentioned, to require the merger of the public trust doctrine and NRS Chapter 533. The majority relies on a United States Supreme Court

decision involving California and Arizona for its proposition that the necessity of finality of water rights supersedes the effective application of an inseverable constitutional restraint on state power. Majority op. at 23 (quoting *Arizona v. California*, 460 U.S. 605, 620 (1983)). But the precedent of both those states, cited and discussed above, establishes that the public trust doctrine exists independently of their respective state water statutes, and even despite the importance of finality. *Hassell*, 837 P.2d at 169 (noting that "[f]inal determination whether the alienation or impairment of a public trust resource violates the public trust doctrine will be made by the judiciary" (quoting *Kootenai*, 671 P.2d at 1092)); *Audubon*, 658 P.2d at 723 (recognizing the "continuing power of the state as administrator of the public trust, a power which extends to the revocation of previously granted rights or to the enforcement of the trust against lands long thought free of the trust").

The posited dichotomy is thus a false one. Crediting Mineral County's position with respect to the public trust doctrine does not require that the decree court revoke senior adjudicated Walker Basin water rights. It bears repeating: Mineral County names several approaches that would better protect the value of Walker Lake *without disturbing vested rights or impinging on principles of finality*. It is not now this court's responsibility—or the Ninth Circuit's—to determine whether Mineral County can prevail across the board on its claims and obtain all the relief it seeks. *See Skilstaf*, 669 F.3d at 1014 (holding that, in reviewing an appeal from an order granting a motion to dismiss, the reviewing court accepts as true the nonmoving party's allegations). But, if Mineral County can demonstrate that conservation of Walker Lake would be enhanced by using these measures, and that the administration of the Basin contrary to those

objectives contravenes the public trust doctrine, it is entitled to proceed. In any case, and as established, the Walker River Decree Court cannot simply ignore its obligations under the doctrine because in application the facts are complicated. *See Ill. Cent. R.*, 146 U.S. at 453 ("The State can no more abdicate its trust over property in which the whole people are interested, like navigable waters . . . than it can abdicate its police powers in the administration of government and the preservation of the peace.").

Bearing all this in mind, I do not deem trivial the concerns of Basin rights holders regarding finality, or deny that their reliance on prior allocations of Basin waters may be substantial. To the contrary, such concerns should enter into any reexamination of authorized diversions in the Basin undertaken by the Walker River Decree Court according to the public trust doctrine. *See Audubon*, 658 P.2d at 729. But, under our system of water rights, a prior appropriation is never permanent—even vested rights are granted only to the extent their holders do not over-appropriate or waste water. *See Desert Irrigation, Ltd. v. State*, 113 Nev. 1049, 1059, 944 P.2d 835, 842 (1997). Accordingly, the existence of such appropriations cannot be said to entirely preclude the Walker River Decree Court from addressing public trust concerns. *See id.* ("It is clear that some responsible body ought to reconsider the allocation of the waters of the . . . Basin. No vested rights bar such consideration.") (footnote omitted).

III.

Based on the discussion offered above, I would answer the Ninth Circuit's first question as follows: The public trust doctrine is one part of Nevada's integrated system of water laws, and assuming the truth of the facts presented, the doctrine protects Walker Lake from harm caused by diversions of Basin waters, whatever the cause, and that this interest must

be cast into the balance in managing the Walker River Basin, even though doing so may impinge on historical practices in utilizing vested water rights. I recognize that my response to the Ninth Circuit's first question begs an answer to its second question, which the majority declined to answer—namely, "If the public trust doctrine applies and allows for reallocation of rights settled under the doctrine of prior appropriation, does the abrogation of such adjudicated or vested rights constitute a 'taking' under the Nevada Constitution requiring payment of just compensation?"

In *Audubon*, the California Supreme Court offered the definitive discussion of the delicate balance an independently supervised public trust doctrine helps strike in an integrated system of water law. *See Audubon*, 658 P.2d at 727. With regard to the powers of the legislature and authorized executive agency, the California court noted that they necessarily have "the power to grant usufructuary licenses that will permit an appropriator to take water from flowing streams and use that water in a distant part of the state, even though this taking does not promote, and may unavoidably harm, the trust uses at the source stream." *Audubon*, 658 P.2d at 727. Indeed, the court admitted that "[t]he population and economy of [a] state depend upon the appropriation of vast quantities of water for uses unrelated to in-stream trust values." *Id.* But weighing against these economic considerations is the truth, demonstrable even by the precipitous decline of Walker Lake, that "an appropriative water rights system administered without consideration of the public trust may cause unnecessary and unjustified harm to trust interests." *Id.* at 728. Thus, the public trust doctrine requires that the state affirmatively reassess the availability of water resources, as necessary to protect the public interest,

"in light of current knowledge or . . . current needs," *id.*, and demand feasible accommodations as necessary.

In this case, Mineral County represents that the objectives of the public trust reassessment may be achieved in any one of several different ways. But importantly, whatever solution the Walker River Decree Court ultimately adopts, it would not demand the creation of a new and superior water right that would upset the prior "allocation of rights" and require a complete restructuring of Nevada water law, as framed by the majority. As discussed above, the limited factual record before this court indicates that the Basin waters are publicly held navigable or nonnavigable surface water tributaries, such that any holders of usufructuary rights in the waters acquired them subject to the public trust in the first instance. *See Mineral Cty.*, 117 Nev. at 247, 20 P.3d at 808 (Rose, J., concurring); *cf. Desert Irrigation*, 113 Nev. at 1059, 944 P.2d at 842 ("Indeed, even those holding certificated, vested, or perfected water rights do not own or acquire title to water. They merely enjoy the right to beneficial use."). Even the vested water rights at issue are only worth the maximum amount of water available for allocation in the Basin, which water source, according to the record before this court, is held in public trust. Thus, while enforcement of the doctrine could potentially alter the amount of Basin water available for private use—as Mineral County points out, just as "any other natural constraint on the already variable availability of water to supply private appropriations"—it does not effect a reallocation of vested water rights. *Audubon*, 658 P.2d at 723 (stating that "while [a rights holder] may assert a vested right to the servient estate (the right of use subject to the trust) and to any improvements he erects, he can claim no vested right to bar recognition of the trust or state action to carry out its purposes").

Accordingly, even to the extent the Walker River Decree Court would act to protect Walker Lake pursuant to the doctrine by limiting the availability of Basin waters, it would not divest anyone of any legal title they previously held. *Id.* ("Except for those rare instances in which a grantee may acquire a right to use former trust property free of restrictions, the grantee holds subject to the trust . . . ."); *see also* Michael C. Blumm, *The Public Trust Doctrine and Private Property: The Accommodation Principle*, 27 Pace Envtl. L. Rev. 649, 650-51 (2010) (stating that "[c]ourts applying [this] doctrine demand all feasible accommodations to preserve and protect trust assets, but they do not attempt to eliminate private property. In fact, virtually all applications of the public trust doctrine leave possession of private property unchanged" and collecting cases (internal footnote omitted)).

The answer to the Ninth Circuit's second question then, is that enforcement of the public trust doctrine here does not result in a "reallocation of water rights," much less implicate the constitutional takings doctrine.

***

In sum, "[t]he public trust is more than an affirmation of state power to use public property for public purposes. It is an affirmation of the duty of the state . . . ." *Kootenai*, 671 P.2d at 1094 (quoting *Audubon*, 658 P.2d at 723-24). And, as the majority recognizes, the duty in question arises from constitutional sources and inherent sovereign authority to protect the interests of "present generations [and] those to come." *Hassell*, 837 P.2d at 169. Moreover, "[t]he check and balance of judicial review" are essential components of the state's fiduciary duties, particularly where water resources are concerned, "provid[ing] a level of protection against

improvident dissipation of an irreplaceable res." *Id.* I therefore cannot agree that the Legislature can implicitly bestow these responsibilities on an executive agent, eliminating any judicial oversight. Even apart from this, Mineral County does not request a "reallocation of rights," only that the existing decree be managed in accordance with long-standing principles.

Accordingly, while I concur in part, I otherwise respectfully dissent.

Pickering, C.J.
Pickering

I concur:

Silver, J.
Silver

104 F.2d 334
Circuit Court of Appeals, Ninth Circuit.

UNITED STATES
v.
WALKER RIVER IRR. DIST. et al.

No. 8779.
|
June 5, 1939.
|
Rehearing Denied July 14, 1939.

Synopsis

Appeal from the District Court of the United States for the District of Nevada; A. F. St. Sure, Judge.

Suit by the United States of America against the Walker River Irrigation District and others to restrain the defendants from interfering with the natural flow of water of Walker river to the extent of 150 cubic feet per second to the Walker River Indian Reservation in Nevada. From an adverse decree, 11 F.Supp. 158, 14 F.Supp. 10, the plaintiff appeals.

Decree reversed, with directions.

West Headnotes (13)

[1] **Indians**
⚭Water Rights and Management

It was unnecessary for intention to reserve waters of Walker river for use of Indians on Walker River Indian Reservation to be evidenced by a treaty or agreement, but such an intention could be implied from statute or executive order setting apart the reservation.

3 Cases that cite this headnote

[2] **Water Law**
⚭Reserved Water Rights

The government has power to reserve waters of nonnavigable streams on public domain, and thus exempt them from subsequent appropriation by others.

1 Cases that cite this headnote

[3] **Water Law**
⚭Effect of state and local law, customs, and rules

Private rights in waters of nonnavigable streams on the public domain are measured by local customs, laws, and judicial decisions.

Cases that cite this headnote

[4] **Water Law**
⚭Effect of state and local law, customs, and rules

The statute providing for protection of vested rights to use of water recognized and acknowledged by local customs, laws, and court decisions was no more than a formal confirmation of local law and usage which had previously met with silent acquiescence on part of government. 43 U.S.C.A. § 661.

Cases that cite this headnote

[5] **Water Law**
⚭Waters reserved for purposes of Indian reservations in general

The claim of government that there had been an implied reservation of waters of Walker river for use of Indians on Walker River Indian

River Indian Reservation set aside in 1859 and Indians had been induced to make their homes on reservation and to engage in farming, there was an implied reservation of water from Walker river, to extent reasonably necessary to supply Indians' needs, prior to rights of settlors diverting water in upper valleys of river subsequent to 1859.

4 Cases that cite this headnote

[12] **Water Law**
⇨Quantity of Water Reserved

The area of irrigable land included in Indian reservation was not necessarily the criterion for measuring amount of water reserved by implication for use of Indians on reservation.

1 Cases that cite this headnote

[13] **Water Law**
⇨Quantity of Water Reserved

Where it appeared that 26.25 cubic feet of water per second from river would satisfy needs of government for Indian reservation for irrigation, government was entitled to that amount only during irrigation season and not to amount which it might demand from year to year not exceeding 150 second feet, since right to use larger amount would encourage waste or tend to induce it.

2 Cases that cite this headnote

Attorneys and Law Firms

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William M. Kearney, Edward F. Lunsford, Myron R. Adams, and Robert Taylor Adams, all of Reno, Nev., George L. Sanford, of Carson City, Nev., and William H. Metson, of San Francisco, Cal., for appellees.

Before GARRECHT, STEPHENS, and HEALY, Circuit Judges.

Opinion

HEALY, Circuit Judge.

The United States brought suit to restrain the appropriators of the waters of the Walker River and its tributaries from interfering with the natural flow of the stream, to the extent of 150 cubic feet per second, to and upon the Walker River Indian Reservation in Nevada. The bill prayed that the plaintiff be adjudged to have a prior right to that quantity of water, that the relative rights in the stream be adjudicated, and that a water master be appointed to carry the decree into effect. After extended hearings before a special master, the court made findings and entered a decree adjudging the United States to be entitled to 22.93 second feet of water with priorities as of various dates, ranging from 1868 to 1886. From this decree the Government has appealed.

The factual background is fully developed in the opinions of the court below, 11 F.Supp. 158, 14 F.Supp. 10, and no more than a brief summary need be attempted here.

The Walker River Indian Reservation was set aside by departmental action on November 29, 1859 for the use of the Pahute tribe. The lands reserved lie about Walker Lake and on both borders of the lower reaches of the Walker River for a distance of thirty miles above the place where the stream empties into the lake. The total area, mostly rough or mountainous country, is in excess of 80,000 acres. The tillable lands reserved have an area of approximately 10,000 acres.

The Walker River is an unnavigable stream the headwaters of which rise on the eastern slopes of the Sierra Nevada mountains in California. The lands along the stream are arid and incapable of producing crops without irrigation, for which purpose the river is the sole source of supply. The lands in the upper valleys were acquired by appellees or their predecessors under the public land laws of the United States, the earliest titles originating soon after the establishment of the reservation. During the period commencing with the year 1860 the

recognized by the laws of Spain or Mexico, or since given recognition in the public policy of the United States. The point of the argument, as we understand it, is that the members of the Pahute tribe had no rights which they might reserve, and none to surrender in exchange for those now claimed for them.

What the legal status of these aborigines may have been we need not stop to inquire. If it be assumed that they were mere sojourners in the abode of their ancestors, it still remains true that the national government was under compelling obligations to protect them. They are no less wards of the nation than are the tribes living elsewhere. In United States v. Kagama, 118 U.S. 375, 383, 6 S.Ct. 1109, 1114, 30 L.Ed. 228, the court described the Indian communities as wholly dependent on the United States, owing no allegiance to the states and receiving from them no protection. 'From their very weakness and helplessness,' said the court, 'there arises the duty of protection, and with it the power. This has always been recognized by the executive, and by congress, and by this court, whenever the question has arisen.' And see Lone Wolf v. Hitchcock, 187 U.S. 553, 23 S.Ct. 216, 47 L.Ed. 299.

[6] [7] (d) One further matter should have preliminary attention. Treaties with the Indians and statutes disposing of property for their benefit have uniformly been given a liberal interpretation favorable to the Indian wards. Choate v. Trapp, 224 U.S. 665, 32 S.Ct. 565, 56 L.Ed. 941; Alaska Pacific Fisheries v. United States, supra; United States v. Nez Perce County, 9 Cir., 95 F.2d 232. The rule has its basis in the obligation which the Government has assumed toward a dependent people. We see no reason why the same rule should not apply in the construction of executive orders. Compare McFadden v. Mountain View Mining & Milling Co., 9 Cir., 97 F. 670; Gibson v. Anderson, 9 Cir., 131 F. 39. Treaty provisions for the allotment of reserved lands invariably contemplate the ultimate passing of fee title to the individuals of the tribe; and the General Allotment *338 Act of February 8, 1887, 24 Stat. 388 was expressly made applicable to reservations created by acts of Congress or by executive order.[6] It was pointed out in the illuminating opinion of Attorney General (now Justice) Stone of May 12, 1924 (Opinions of Attorneys General, vol. 34, p. 171), that doubts whether the reservation of lands for the Indians included rights to hidden or latent resources, such as minerals, petroleum or water power, have, as a practical matter, uniformly been resolved in favor of the Indians

We turn now to the circumstances under which the Walker River Indian Reservation was set aside. The files of the Interior Department bearing on this subject are voluminous. On November 26, 1859, F. Dodge, agent for the Indians in Utah Territory, of which Nevada was then a part, wrote the Commissioner of Indian Affairs suggesting that the northwest part of the valley of the Truckee River, including Pyramid Lake, and the northeast part of the valley of Walker's River, including the lake of the same, be reserved for the Indians of his agency. The localities and boundaries of the proposed reservations were indicated on an accompanying map. 'These,' stated the letter, 'are isolated spots, embracing large fisheries, surrounded by mountains and deserts, and will have the advantage of being their home from choice. '[7] The Commissioner of Indian Affairs thereupon wrote the Secretary of the Interior, calling his attention to Dodge's letter, and stating, among other things, 'the tracts selected by the Agent, embrace but a small portion of land suited for agricultural purposes, yet, it is believed that there will be a sufficiency for the sustenance of the Washoe and Pahute tribes of Indians, in connection with the fish which they may obtain from Pyramid and Walker Lakes, and with a view to secure suitable homes for these Indians where they can be protected from the encroachments of the whites, I have the honor to suggest that, with your concurrence, the subject may be laid before the President for his consideration, with a recommendation that the tracts of country indicated on the map may be set apart and reserved from sale or settlement, for Indian use.'

The Indian Commissioner on November 29, 1859 wrote the Commissioner of the General Land Office, suggesting the propriety and necessity of reserving these tracts for Indian use, and requesting that the Surveyor General of Utah Territory be directed to respect the reservations on the plats of survey when the public surveys should be extended over them, and that in the meantime the local land offices, as established, be instructed to respect the reservations on their books. On December 8 of the same year the Commissioner of the General Land Office wrote the Surveyor General in Salt Lake City, instructing him to reserve for Indian purposes the two tracts described and indicated on an enclosed map.

[8] [9] The Walker River reservation as originally defined was surveyed within a few years, and in 1874 President Grant issued an executive order setting the lands apart for the Pahute and other Indians residing thereon. The action taken in November, 1859 initiated the establishment of the Walker River Indian Reservation. The acts of the heads of departments are the acts of the executive. Wilcox v. Jackson, 13 Pet. 498, 513, 10 L.Ed. 264; Wolsey v. Chapman, 101 U.S. 755, 769, 25 L.Ed. 915. The subsequent proclamation of the President merely gave formal sanction to an accomplished fact. Northern Pac. Ry. Co. v. Wismer, 246 U.S. 283, 38 S.Ct. 240, 62 L.Ed. 716; *339 Minnesota v. Hitchcock, 185 U.S. 373, 385, 389, 390, 22 S.Ct. 650, 46 L.Ed. 954. That this was true

continuous flow of 26.25 cubic feet of water per second, to be diverted from Walker River upon or above Walker River Indian Reservation during the irrigation season of one hundred and eighty days for the irrigation of two thousand one hundred acres of land on the reservation, and the flow of water reasonably necessary for domestic and stock watering purposes and for power purposes to the extent now used by the Government, during the non-irrigating season, with a priority of November 29, 1859, and enjoining the defendants from preventing or interfering with the natural flow of the described quantities of water in the channels of the stream and its tributaries to and upon the reservation.

All Citations

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Footnotes

1 Cf. Conrad Investment Co. v. United States, 9 Cir., 161 F. 829; United States v. Powers, 9 Cir., 94 F.2d 783, affirmed 59 S.Ct. 344, 83 L.Ed. 330; United States v. McIntire, 9 Cir., 101 F.2d 650.

2 The summary of the pleadings and facts as set out in the opinion of this court, 9 Cir., 143 F. 740, and of the Supreme Court, has led to misapprehension concerning the scope of the holding in Winters v. United States. It is assumed by appellees here that in the Winters case the Government had established its rights in the waters of Milk River by prior appropriation. An examination of the record in that case discloses the contrary. The affidavits and testimony before the court showed that in 1890 the Government installed a pump of the capacity of 100 miner's inches for pumping water from the stream for domestic and irrigation purposes. In 1893 another pump of 150 inches capacity was installed. It was not until 1898 that the Government began the construction of a canal for the diversion of the waters of the stream. Meanwhile, commencing with 1890, and prior to 1898, diversion dams and canals had been built by the settlers above, or by mutual companies which they organized, and large quantities of water had been appropriated and applied to beneficial use.

3 In Nevada it was held soon after statehood (1864) that where the right to the use of running water was based upon appropriation, and not upon ownership of the soil, the first appropriator had the superior right. Lobdell v. Simpson, 2 Nev. 274, 90 Am.Dec. 537. In 1885, in Jones v. Adams, 19 Nev. 78, 6 P. 442, 3 Am.St.Rep. 788, the common law rule of riparian rights was declared in applicable to conditions existing in the state. See, also, Vineyard Land & Stock Co. v. District Court, 42 Nev. 1, 171 P. 166, and United States v. Humboldt Lovelock Irrig. L. & P. Co., 9 Cir., 97 F.2d 38, 42, 43.

4 Section 9: 'That whenever, by priority of possession, rights to the use of water for mining, agricultural, manufacturing, or other purposes, have vested and accrued, and the same are recognized and acknowledged by the local customs, laws, and the decisions of courts, the possessors and owners of such vested rights shall be maintained and protected in the same; and the right of way for the construction of ditches and canals for the purposes aforesaid is hereby acknowledged and confirmed * * * .' 43 U.S.C.A. 661.

5 Cf. United States v. McGowan, 9 Cir., 89 F.2d 201, reversed, 302 U.S. 535, 58 S.Ct. 286, 82 L.Ed. 410.

6 Allotments to individual Indians on the Walker River reservation were made in 1906 under the act of May 27, 1902, 32 Stat. 260 and the General Allotment Act.

7 Continuing, the agent observed that 'the Indians of my agency linger about the graves of their ancestors— 'but the game is gone', and now, the steady tread of the white man is upon them. The green valleys, too, once spotted with game 'are not theirs now.' Necessity make them barter the virtue of their companions as a commodity of the market and the bitter contemplation burns in their bosoms the stern reality of their fate. Driven by destitution they seek refuge in crime, and show themselves unsparing because they have been unspared.
'I sincerely hope that those asylums will be made for them, where they can be free from the influence of the 'White Brigands' who loiter about our great overland mail and emigrant routes— using them as their instruments to rob and plunder our citizens.'

8 Commencing with the act of March 3, 1863, 12 Stat. 774, 791, numerous appropriations were made for the Indian Service in the territory of Nevada, and later in the state, for 'presents of goods, agricultural implements, and other useful articles, and to assist them to locate in permanent abodes and sustain themselves by the pursuits of civilized life.'

News

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NEWS | 03.01.22

New Mexico Supreme Court Invalidates "Non-Navigable Rule," Voids Certificates To Close Public Water

By BEN NEARY

NMWF Conservation Director

The New Mexico Supreme Court on Tuesday unanimously decided that a state game commission rule purporting to allow landowners to limit access to public waters is unconstitutional and void.

The court ruled in response to a legal challenge brought by the New Mexico Wildlife Federation, the Adobe Whitewater Club and the New Mexico Chapter of Backcountry Hunters & Anglers.

Santa Fe lawyers Gene Gallegos and Seth Cohen represented the groups at Tuesday's court hearing. They emphasized that the rule violates the New Mexico State Constitution's guarantee that the unappropriated waters of the state belong to the public.

In their arguments on Tuesday, Gallegos and Cohen pointed out that the New Mexico Supreme Court already addressed the issue of the public right to access the waters of the state in its 1945 landmark case, State ex rel. State Game Commission v. Red River Valley Co.

In the Red River case, the court concluded that the public — meaning anglers, boaters or others — may use streams and streambeds where they run through private property as long as the public doesn't trespass across private land to access the waters, or trespass from the stream onto private land. The court noted that under Indian, Spanish and Mexican law that governed New Mexico before statehood, everyone had the right to fish in streams.

Since the game commission rule went into effect in 2018, the commission has granted five applications from out-of-state landowners to certify waters as "non-navigable" on New Mexico waterways, including stretches of the Rio Chama and Pecos River. After securing the certifications, landowners have denied public access to the waters, in some instances placing fences across the rivers that prevent boating access.

After hearing arguments in the case on Tuesday, the supreme court justices took a short recess before returning to the courtroom to announce that they were unanimous in finding that the rule is unconstitutional and that the "non-navigable" certificates that the game commission had issued to landowners are void. The court will issue a written opinion spelling out its legal findings.

The state game commission voted late Tuesday afternoon to repeal the certification rule as a result of the court ruling.

Representatives of the groups that brought the legal challenge said they were heartened to see the court roll back the rule and stand up for public access:

"The decision by the New Mexico Supreme Court confirms what the New Mexico Wildlife Federation has been saying for years, that allowing private landowners to restrict public access through rivers where those rivers cross private land is a violation of a right reserved to us by our New Mexico State Constitution," said Jesse Deubel, executive director of the NMWF.

"The privatization of publicly owned natural resources seems to be an increasing threat across the West," Deubel said. "From access to public lands and waters to the increased push to privatize wildlife, these violations of the Public Trust Doctrine are unacceptable and cannot be tolerated."

Joel Gay, policy chair for NM Backcountry Hunters & Anglers, called the decision great news for anglers, boaters and others who use public waters in New Mexico. But he said it shouldn't be a surprise.

"In 1945 the Supreme Court said the same thing – that these waters throughout the state are for everyone to enjoy for recreational use," Gay said. "We don't know how that constitutional right got lost, but for decades we have been told otherwise. Our chapter thanks the Supreme Court for setting the record straight — again."

Scott Carpenter, president of the Adobe Whitewater Club, said New Mexico's rivers and streams are rare and precious resources that all New Mexicans are entitled to enjoy.

"This access is part of New Mexico's heritage," Carpenter said. "The New Mexico Supreme Court unanimously ruled today that the public has a long-standing constitutional right to recreational uses of these rivers and streams. That right includes contact with the streambed and banks that is incidental to recreational use of the water. The court ruled it is unconstitutional for private landowners to fence the public out."

Robert Levin, New Mexico state director of the American Canoe Association, said, "A handful of landowners do not have the exclusive right to the recreational and economic benefits of public streams flowing across private property. They cannot monopolize the public resource for their exclusive benefit."

Steve Harris, director of the New Mexico River Outfitters Association, said, "I'm thankful that the game commission rule will no longer be a barrier to our state's policy of developing a robust river-touring component to our outdoor recreation economy."

Sen. Martin Heinrich, D-N.M., issued a statement applauding the court ruling. He and former U.S. Sen Tom Udall had filed a "friend of the court" brief in support of overturning the commission rule.

"Today is a pretty exciting day in New Mexico history," Heinrich said. "Our state supreme court reaffirmed the constitutional rights of New Mexicans to their public waters. This is a huge victory for people who care about our history, our culture and our natural resources, and I want to thank everyone who made this possible to make sure that public waters stay in public hands."

Groups representing ranchers and landowners had intervened in the case to argue in support of the rule. Lawyer Jeremy Harrison represented the groups at Tuesday's hearing, saying that the public has a right to float on rivers and streams that cross private lands, if they can, but not to get out and recreate. He said the "incidental touching" of an oar on the streambed would be permitted.

Justice C. Shannon Bacon questioned Harrison about his position.

"What about a fly fisherman, walking down the stream, casting a fly — which people do in New Mexico pretty regularly?" Bacon asked. "Is incidental touching in your definition walking down the streambed that is now deemed private by application of this rule?"

Harrison replied that it was not. "At that point, your touching of the land is not incidental to your use of the waters," he said.

Bacon responded, "That's a stretch. If you can't walk on the streambed, and your use and enjoyment protected by the constitution – being your ability to fly fish – unless you can figure out how we can all walk on water – how is that not contrary to the public use and enjoyment of the public water?"

Harrison responded that the constitutional ownership of the water, and the use of the water, is not unlimited. "There's a balance here, because the right to own property is a fundamental protected right, guaranteed by the federal and state constitutions," he said.

Chief Justice Michael Vigil questioned Cohen about what constitutes a permissible recreational use.

Cohen responded that the public has to be engaged in a reasonable recreational use of the water. He said that carries with it the incidental right to touch the streambed and the bank.

"It's important also for the court to articulate what has necessarily been true throughout the course of New Mexico history, which is the public's constitutional right to make recreational use of the public waters includes the incidental right necessarily to touch the streambed and bank as necessarily to effectuate recreational use," Cohen said.

Aaron Wolf, lawyer for the game commission, said the current game commission has no intention of using the rule to certify more stretches of water. The commission last summer rejected five pending applications from landowners seeking to have waterways over their property declared non-navigable and closed to the public.

Gov. Michelle Lujan Grisham has removed two game commissioners since the beginning of her term. Both former commissioners, Joanna Prukop and Jeremy Vesbach, have said they believe the governor targeted them at least in part because they expressed opposition to granting landowner applications under the non-navigable rule. Some of the landowners have made campaign contributions to the governor.

Prukop was removed as commission chair in late 2019 after the commission voted to impose a moratorium on acting on pending applications.

Landowners later went to federal court and secured a court order forcing the commission to act on their applications. Vesbach led the commission's rejection last summer of the five pending applications. Lujan Grisham removed him from the commission early this year.

Prukop said Tuesday she felt absolutely vindicated about what she tried to do as commission chair by the court ruling.

"Today is a wonderful day for state constitutional law in New Mexico," Prukop said.

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NEW MEXICO WILDLIFE FEDERATION

From: **Hattie Johnson, American Whitewater** hattie@americanwhitewater.org
Subject: New Mexico Supreme Court Affirms Constitutional Right to Paddle Rivers!
Date: March 7, 2022 at 3:21 PM
To: Club Contact Sierra Nevada Whitewater Club cralbright@juno.com

AMERICAN WHITEWATER

New Mexico Supreme Court Affirms Constitutional Right to Paddle State's Rivers and Streams

Club,

Last week in a very big win for river access, the New Mexico Supreme Court unanimously ruled that the State Constitution does not permit New Mexico's waterways to be "privatized" and sealed off from public access. The lead petitioner on the case, Adobe Whitewater Club (AWC), is an affiliate

Whitewater Club (NWC), is an affiliate club of American Whitewater. AWC and co-petitioners from the New Mexico Wildlife Federation, and the Backcountry Hunters and Anglers New Mexico chapter, were represented in this case by Santa Fe based attorneys Gene Gallegos and Seth Cohen. AWC and AW, in addition to the New Mexico Rivers Outfitters Association and American Canoe Association are founding members of the New Mexico Paddlers Coalition, a group who has worked diligently on overturning this stream privatization effort since 2016.

After a one-hour hearing and 15 minutes of deliberation, Chief Justice Vigil announced that all five justices agreed the issue was of "great public interest," the Petitioners had standing, the Game Commission rule is unconstitutional, and all certificates issued to the privatizers are void. The Court issued a prohibitive writ of mandamus to the State Game Commission. The State Game Commission met in an emergency meeting immediately following the Court's decision and rescinded the offending privatization rule.

The five river privatization certificates voided had authorized landowners closure of boatable sections on the Upper Rio Chama and the Upper Pecos River. On March 2, 2022, the

Pecos River. On March 2, 2022, the Court issued this Order.

This Supreme Court decision affirmed New Mexican's constitutional right to paddle all of the state's rivers. The water in New Mexico's rivers and streams belongs to the public. The Court said rivers are not for the exclusive benefit of private landowners. Rivers and their public users have an easement.

"Paddlers are very pleased that the New Mexico Supreme Court ruled that New Mexico's rivers and streams are for the enjoyment of all. We look forward to removal of threatening signage and the hazardous river barricades that were erected to prevent travel down river," said Sherry Barrett, Chair of New Mexico Paddlers Coalition. "Our rivers and streams are the lifeblood of New Mexico and will continue to be enjoyed by all New Mexicans and visitors to our state."

"New Mexico's rivers and streams are rare and precious resources that all New Mexicans are entitled to enjoy," said Scott Carpenter, President of the Adobe Whitewater Club. "This access is part of New Mexico's heritage. The NM Supreme Court unanimously ruled that the public has a long-standing constitutional right to recreational uses of these rivers and streams. That right

of these rivers and streams. That right includes contact with the streambed and banks that is incidental to recreational use of the water. The court ruled it is unconstitutional for private landowners to fence the public out."

New Mexico's outdoor recreation economy supports 33,500 jobs and $1.2B of income. Today's decision ensures that the residents and visitors of New Mexico can access the rivers that provide those recreational opportunities. Paddlers from across the country travel to enjoy New Mexico's unique and beautiful rivers and we are happy to see that their rights to do so are being upheld.

"I'm thankful that the Game Commission rule will no longer be a barrier to our state's policy of developing a robust river touring component to our outdoor recreation economy." said Steve Harris, director of the New Mexico River Outfitters Association.

The paddling community recognizes and respects the rights of landowners to preclude trespass on private land bordering the river. We are dedicated to working with landowners to ensure all our natural resources are protected.

The New Mexico Paddlers Coalition's

mission is to protect and improve access to New Mexico's rivers and streams. To support our mission, we cooperate with individuals, government agencies, and other non-governmental organizations to promote river conservation; provide leadership in outdoor ethics and education; support stewardship initiatives; and promote safety.

American Whitewater is thankful to the amazing lawyers, great partners, New Mexico Paddlers' Coalition, New Mexico paddling community at large and especially AWC members. We are so pleased to have won this most recent public stream access victory for all!

Sincerely,

Hattie Johnson

and the NM Paddlers Coalition and the entire team at American Whitewater

Utah Supreme Court Allows Public Waters Access Act to Stand

From the Utah Stream Access Coalition:

Salt Lake City, Utah –

Today's decision by the Utah Supreme Court ends a thirteen-year effort by the Utah Stream Access Coalition (the "Coalition") to overturn the Public Waters Access Act of 2010 (the "PWAA") and restore public access to Utah's non-navigable rivers and streams. The Court ruled that the public's access to these waterways, which the PWAA took away, is not rooted in or protected by the Utah State Constitution. Accordingly, the PWAA will stand.

While the Coalition is disappointed in the decision, it remains steadfast and measured in its mission. Today's decision ends only one of several avenues by which the Coalition aims to restore public access to Utah's rivers and streams. It will continue its efforts to have the State identify navigable waterways and declare them open to public recreational use, as it did successfully on the upper Weber River in 2017. And the Coalition will continue to advocate for the repeal and/or amendment of the PWAA, which, contrary to its name, restricts the public's ability to recreate on over 2,700 miles of Utah's rivers and streams that comprise some 43% of Utah's fishable waterways.

In 2015, the Coalition convinced Utah's Third District Court that the uppermost 40 miles of the Weber River met the test of navigability based on evidence that the river was used for commercial purposes prior to Utah becoming a state. That ruling, which was affirmed by the Utah Supreme Court in 2017, means that the public has a right to use the beds and banks of the upper Weber River – and other navigable rivers in the State – for lawful recreational purposes, in perpetuity.

The Coalition is committed to the principle that the waters flowing in all of Utah's rivers and streams are owned by the public and therefore members of the public should have the right to make use of such waters for lawful recreational purposes, regardless of whether they are navigable or who holds title to the lands beneath them.

ENVIRONMENT FRESHWATER UTAH UTAH STREAM ACCESS COALITION

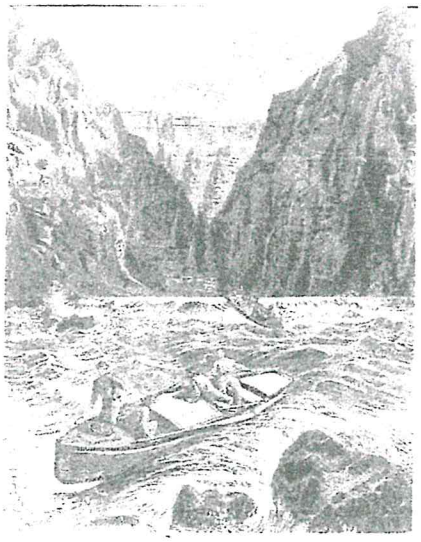
Fly Fishing for Permit in 1872 Mining Law Reform

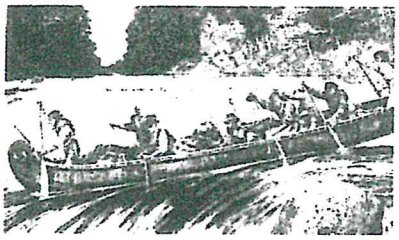


Public Rights on Rivers

Canoeing, kayaking, rafting, fishing, and fowling rights

River conservation and water rights

National Organization for Rivers

Public Rights on Rivers

Second edition ♦ November 2013

Researched, compiled, and edited by the staff of the National Organization for Rivers, past and present.

The thoughtful comments of all those who reviewed earlier versions of this work are most gratefully acknowledged.

Public Rights on Rivers

Table of Contents

♦ ♦ ♦

Chapter One: The development of river law

What rights do you have to canoe, kayak, raft, fish, and duck hunt on rivers?

Can you canoe on rivers through private land in some states, but not in others? If you get out to push your canoe over a shallow spot, or carry it around a log jam, are you trespassing?

Can ranchers erect barbed-wire fences across rivers? Can a private fishing or hunting club keep you off their section of river?

If your property deed says that you own to the middle of a river, can you limit river users to the other half of the river?

Which rivers are legally navigable, and who decides which rivers qualify?

Can farmers divert almost all the water out of a river into irrigation ditches? Can they bulldoze along the shore of a river?

Can cities dump partly-treated sewage into rivers? Can industrial sites allow toxins lying on the ground to wash into the nearest river whenever it rains?

Can government agencies charge a fee for the right to run a river? Can they make you pay a government concessionaire in order to run a river, unless you obtain one of the few noncommercial permits that are available in a lottery?

The answers to these questions are matters of law, but they are not as simple as citing an act of Congress. There are U.S. Supreme Court decisions and state laws to consider.[1]

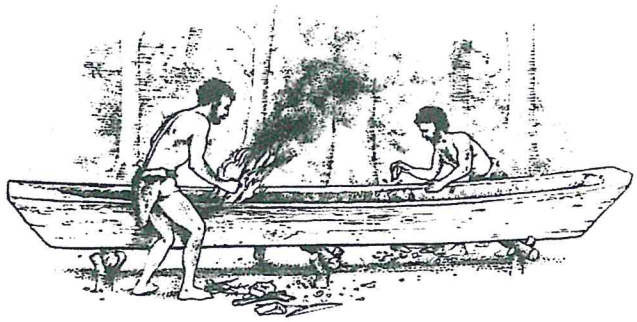
River law, like other areas of law, was not created in a vacuum. Instead, it developed in response to evolving human uses of rivers, and the legal disputes that arose in the course of those uses. Public rights on rivers today are based largely on historical uses of rivers. For example, the U.S. Supreme Court has held that even small, shallow rivers continue to be public rivers in today's world, if they were usable by fur traders in canoes centuries ago.[2] The Court has also confirmed that public rights on a river are largely a matter of the actual *facts* about the river.[3] Consequently, one must understand the *facts* about historical uses of rivers before coming to conclusions about the current state of the *law*. Mistaken views about the history of river use will lead to mistaken views about public rights on rivers today.

In other words, if you try to answer questions such as those posed above by citing statutes and court decisions from different eras of history, without an understanding of how rivers were actually used during those eras, you soon get into a mishmash of confusing, almost conflicting views. However, if you consider the history of human uses of rivers, and how the law developed in response to those uses, many of the seeming conflicts fall away, and the answers to such questions become clear.

Consequently, this chapter outlines the facts about historical uses of rivers, as well as the concurrent development of river law.

Ancient uses of rivers

People were boating on rivers long before recorded history. Archeological evidence suggests that primitive men were paddling small watercraft of some sort over 800,000 years ago, even before the ability to use language had fully developed.[4] Ancient peoples hollowed out logs to make **dugout canoes,** a technique still used in some places today. The oldest known dugout canoes still in existence, dating from about 8000 to 6300 B.C., were found in the Netherlands. Another canoe, from about 4000 B.C., was unearthed in the tomb of a Sumerian king near the Euphrates River.[5]



People have been making dugout canoes for thousands of years, using tools and fire to hollow out logs.

Dugout canoes can be heavy and hard to maneuver. Some ancient peoples found that by building a frame of wood, then covering it with animal skins or the bark of certain trees, they could make a much lighter canoe, more manueuverable on the water and easier to carry overland.

[1] **U.S. Supreme Court decisions,** and federal appeals court decisions, are available on the Internet at web sites such as **supremecourt.gov, openjurist.org** and **findlaw.com.** Most other decisions cited in this book can be viewed on the Internet by doing a search using the name and numbers of the case. The **footnotes** in this book are written to be clear to non-technical readers, rather than following traditional law journal formats. The **page numbers** for passages quoted from decisions are usually omitted, because they can be readily located with "Find" commands in today's digital world. The prefix **www** is usually omitted.

[2] **Rivers usable by fur traders in canoes:** *Economy Light & Power Co. v. United States,* 256 U.S. 113 (1921) (Regarding a shallow river, with "boulders and obstructions," used in "early fur-trading days," from about 1675 to 1825.)

[3] **Actual facts about a river:** *United States v. Utah,* 283 U.S. 64 (1931) ("Each determination as to navigability must stand on its own set of facts.")

[4] **Small watercraft over 800,000 years ago:** Based on findings in 2004 on the Indonesian island of Flores, by archeologists led by Michael Morwood. See humanorigins.si.edu/research/asian-research/hobbits and its bibliography.

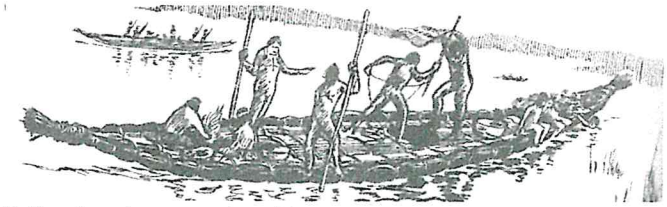
[5] **Oldest known dugout canoes:** *The History of the Ship* by Richard Woodman, Lyons Press 2002, page 11.

Since ancient times, canoes have been propelled with paddles, or by long poles pushing off the bottom in shallow water, or by rigging a small sail.

In northern regions, ancient peoples made **kayaks,** which are covered canoes in which the user is seated and uses a double-ended paddle. Archeologists have concluded that kayaks have been used for thousands of years in Asia, as well as across North America, from Alaska to the east coast of Canada, as well as in Greenland.[6] Evidence indicates that ancient peoples used kayaks and similar craft for fishing and fowling, and to migrate long distances. For example, the recent DNA sequencing of ancient human hair found in the permafrost in Greenland revealed that the hair came from a man of the Saqqaq culture, living around 4,000 years ago, and that the man's closest relatives were the Chukchis of eastern Siberia.[7]

Kayaks have been used in Asia and North America for many centuries, for fishing, fowling, and transportation.

In temperate and tropical regions, ancient peoples made **reed boats,** a form of canoe consisting of reeds lashed together. (Also called *reed rafts,* since they consist of floating material lashed together, rather than an actual hull that keeps out water.) The oldest known remnants of a reed boat were found in 2002 in Kuwait. The boat was covered with *bitumen* (a kind of tar) from the oil-rich ground, to help waterproof it, and was about 7000 years old.[8] In ancient Egypt, reed boats were made of papyrus reeds, as depicted in paintings from about 4000 B.C.[9] They are still used today on Lake Tana in Ethiopia. The Bible says that when Moses was an infant, his mother set him afloat among the reeds along the edge of the Nile River in a miniature papyrus reed boat, coated with bitumen, to save him from a royal order that required the killing of Hebrew baby boys.[10] In pre-Columbian North America, reed boats were used on rivers in California that flow into San Francisco Bay, by several tribes collectively known as the Ohlone. Archeologists estimate that in Pre-Columbian times, more people lived in the San Francisco Bay area than in any other area of what is now the United States and Canada. Their primary source of food was fishing and fowling, using reed boats.[11] By 1900, reed boats were no longer used in the United States, but were still used for fishing in northern Mexico, as shown in black and white photographs from the time. Today, they are still used on Lake Titicaca in Bolivia, and along the coast of Peru.



Native Americans used reed boats on rivers in northern California.

In other places, ancient peoples lashed logs together to make **log rafts.** A log raft is quite heavy, and some groups found that by making a lighter wooden frame, then attaching several inflated animal skins to it, they could make a lighter and more maneuverable raft, more like the modern inflated river rafts used today. Various types of rafts were used in the ancient world. Some were propelled by oars, like a rowboat, while others were propelled by paddles, like a canoe.[12]

By the time the ancient civilizations arose, river boats were already well developed. Babylon flourished near the Tigris and Euphrates rivers, which were used for crop irrigation, transportation, and fishing. The pharaohs of ancient Egypt cruised the Nile on long, ornate vessels, rowed by teams of oarsmen, and the goods of the land were transported in a variety of boats along the river, using paddles, oars, and sails.[13]

Ancient raft designs are still in use in some places today, made from logs lashed together (the original **catamaran** in the ancient Tamil language) or inflated animal hides attached to a wood frame, somewhat like a modern inflated rubber raft with an oar frame.

[6] **Kayaks in use for thousands of years:** *Bones, Boats, and Bison: Archeology and the First Colonization of Western North America* by E. James Dixon, University of New Mexico Press 2000.

[7] **Kayaks used to migrate long distances:** "Ancient DNA set to rewrite human history" by Rex Dalton, *Nature* 465 (2010) page 148 (at nature.com.)

[8] **Reed boat in Kuwait:** "Report of Oldest Boat Hints at Early Trade Routes" by Andrew Lawler, *Science* Magazine, June 7, 2002, Vol. 296 no. 5574, page 1791.

[9] **Reed boats in Egypt about 4000 B.C.:** *Boats of the World: From the Stone Age to Medieval Times* by Sean McGrail, Oxford University Press 2004.

[10] **Moses in reed boat:** Exodus 2:3 (papyrus reeds often called *bulrushes.*)

[11] **Reed boats and large population in San Francisco Bay area:** *The Ohlone Way, Indian Life in the San Francisco-Monterey Bay Area* by Malcolm Margolin, illustrated by Michael Harney, Heyday Books, Berkeley 1978.

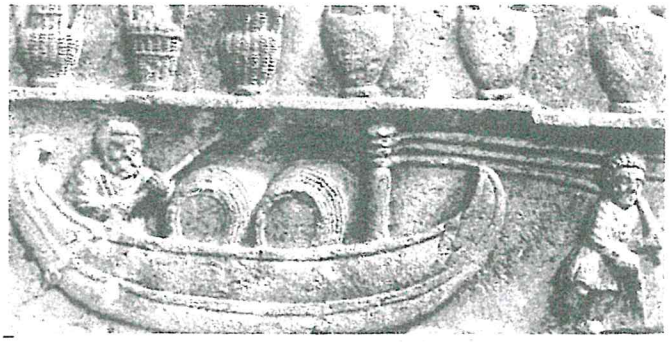
[12] **Ancient rafts using inflated animal skins:** *The History of the Ship* by Richard Woodman, Lyons Press 2002, page 12.

[13] **Ancient boats on rivers:** *Egyptian Boats and Ships* by Steve Vinson, Shire Publications 1994. Reconstructed ancient Egyptian boats are still on display at the Maritime Museum *(Museu de Marinha)* in Lisbon, among other places.

In ancient civilizations around the Mediterranean, loads of grain and barrels of wine were sent by river from farms and vineyards in higher country to cities downstream and along the coasts. Loads of ore, as well as stone and lumber for use as building materials, were also taken down rivers.

Boatmen used several methods to get their empty boats back upstream, against the current. In some stretches they rowed the boats, with six or more pairs of oars. In other stretches they propelled the boats upstream by pushing off the riverbed with long poles. At times they hoisted a small sail. (It may seem impractical to sail up a river, until one considers that on a number of rivers there is often an afternoon wind blowing upstream, coming inland from the ocean.)

Where the current was too swift for rowing, poling, or sailing, boats were pulled upstream using ropes from the bank, pulled by men, mules, or oxen. This process is known as **cordelling,** from the French word for a tow rope, *cordelle*. From today's perspective this may sound like too much work, until one considers the alternatives. In ancient times, roads were typically rough and rutted. In hilly areas they were steep and rocky. Carts and wagons, even if pulled by a team of oxen, could not carry large, heavy loads for long distances. Rivers, on the other hand, could be used to transport large, heavy loads for long distances downstream with relatively little effort. Having men, mules, or oxen pull the empty boats back upstream, after the cargo was delivered, was a small price to pay for this great transportation advantage.



An ancient Roman carving shows the process of towing a boat upstream, from the bank, known as **cordelling.**

Fishing in ancient times. Archaeologists have found widespread evidence that the people of ancient civilizations frequently fished in rivers. Fish typically release millions of eggs, so fish populations can usually recover quite readily from moderate fishing pressure. Therefore fish provided ancient people with a sustainable food supply.

Since ancient times, people have preserved fish by salting and drying them. Fish dried in this fashion are still sold in local markets in much of the world today. Of course, dried fish cannot match the flavor and tenderness of fresh fish. Before the advent of modern refrigeration, people living near the coasts could eat fresh fish from the ocean, while those living further inland could obtain fresh fish only from rivers. Consequently, rivers have been an important source of food since ancient times.

Fowling in ancient times. Rivers are typically frequented by ducks, geese, and other waterfowl. People have been fowling along rivers, to obtain food, since prehistoric times, using spears, arrows, snares, and other devices.

Rivers as boundaries. The practice of using rivers as boundaries is as old as mankind. Rivers have long served as boundaries between tribal groups, between individual farms, and even between nations.

As the water level rises and falls in a river flowing through fairly flat country, the edges of the river move outward and inward. Consequently, people discovered long ago that describing the boundary of a property as the *edge* of a river was problematic, because the location of the edge tends to be vague and transitory. They found that it was more useful to describe the boundary as being the line running down the *deepest part* of the river. Even at very low water levels, the remaining trickle of water still flows down the deepest part of the river channel, providing a fairly definite boundary line between the adjacent properties, and giving access to the water to the landowners on both sides of the river.

In Latin this line was called the *filum aquae,* literally "the line of the water." Early nordic languages called it the *thalweg* of the river, literally the "dale-way" (in the sense of the path taken by water down a dale or valley.) In English it is often called the *thread* of the river. It is still used as a property boundary in many places.

A *riparian* landowner is one who owns land along a river (from the Latin word *ripa,* meaning the bank of a river.) This refers to people who own land along one or both sides of a river. Ancient law reconciled private ownership of land along rivers with public rights to use the beds and banks of rivers, as discussed below.

River law in ancient times

The laws of ancient civilizations reflected the importance of boating, fishing and fowling on rivers in those centuries, as follows:

The Institutes of Justinian and the Laws of Nature. A foundational document in the law of western civilization is the *Corpus Juris Civilis,* ("The Body of Civil Law,") published under the direction of the Roman emperor Justinian in 534 A.D. Two of the parts of this lengthy document are the *Institutes* and the *Digest*.

Today, the massive doors at the entrance to the U.S. Supreme Court are sculpted with the image of Justinian proclaiming the *Institutes*. One literally "walks through the Institutes of Justinian" to enter the highest court in the land.

The legal scholars who compiled the *Institutes* explained that they had, in turn, "collected the whole ancient law" in their treatise, from civilizations that flourished many centuries earlier, including the civilizations of ancient Greece, Egypt, and previous civilizations.

Ancient law, as reflected in the *Institutes*, held that "running water" is "common to mankind," and that "all rivers and ports are public, hence the right of fishing in a port, or in rivers, is common to all men." (Sections 2.1.1 and 2.1.2.) It recognized public rights to boat and fish in rivers, using the banks as well as the water itself. (Section 2.1.4.)[14]

It held that these public rights on rivers are part of the *Laws of Nature* (also known as the *Law of Nature*, or *natural law*.) Ancient law viewed the Laws of Nature as being "established by divine providence," so that they "remain forever fixed and immutable." (Section 1.2.11.) In other words, ancient law viewed public boating and fishing rights on rivers as being granted to mankind by God (or the gods,) and therefore as not being revocable by human governments.

Ancient law also held that these rights are part of the *Law of Nations*, in the sense of being fundamental law common to all nations (not in the sense of being part of international law.)

Ancient law reconciled private ownership of the banks of rivers with public rights to use the banks. It said, "The public use of the banks of a river is part of the Law of Nations, just as is that of the river itself. All persons therefore are as much at liberty to bring their vessels to the bank, to fasten ropes to the trees growing there, and to place any part of their cargo there, as to navigate the river itself. But the banks of a river are the property of those whose land they adjoin; and consequently the trees growing on them are also the property of the same persons." (Section 2.1.4.) In other words, it affirmed a public *easement* to use the banks of rivers, even where the *ownership* of the banks was private.

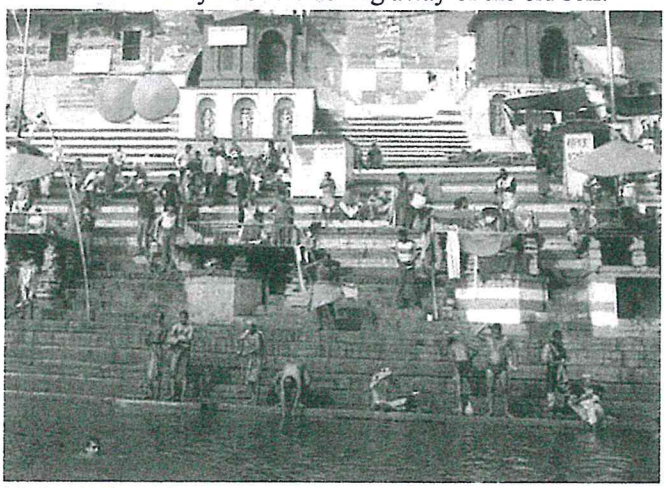
As reflected in the *Digest*, under ancient law it was "forbidden to do anything to a river or to its banks, or place anything thereon, that would impede navigation or use of the banks." (Section 43.12.1.) Construction along a river was permitted "only if no damage were done to navigation." (Section 43.12.1.15.)

Regarding the right to divert water from rivers, ancient law said, "Water may be led from a river, unless it makes the river less navigable." (Section 43.12.1.15.) Water was "not allowed to be withdrawn if it would cause injury" (in the legal sense) to other river users. (Sections 8.3.17 and 43.20.3.1.)

The right to travel. Since rivers served as important routes of travel in ancient times, the public right to travel is relevant to river law. The earliest known charter of human rights was issued by Cyrus the Great, ruler of Persia during the 500s B.C. His charter affirmed, among other things, that people have the right to "live in all regions" or "live where they want to."[15] Legal scholars consider this to be the earliest known confirmation of the right to travel.

Ancient law regarding the spiritual significance of rivers. The concept of separation of church and state is relatively recent in human history. In ancient times, the government and the predominant religion in society were often one and the same, so that principles of law rested on principles of religion. Therefore, to better understand the origins of river law, we must be aware of ancient views about the religious and spiritual significance of rivers.

Since prehistoric times, people have known that running water is generally cleaner than stagnant water, and that rivers bring life-giving water to plants, animals, and people. They have also noticed that rivers make a variety of natural, almost musical sounds. The oldest of the world's major religions, Hinduism, is said to have started when wise men stood on the banks of rivers in India, about 4,000 years ago, and sang songs that they considered to be "inspired by the breath of God." The Hindus and other ancient religions used rivers for baptism, and archaeologists and anthropologists agree that the practice of baptism is very old. It is likely that baptisms were conducted in rivers (rather than more convenient locations such as lakes,) because river water tends to be cleaner, and because the moving current of a river adds to the symbolic washing away of the old self.[16]



Hindus bathe daily in the Ganges River in northern India, as they have for thousands of years.

Later religions continued these views regarding water, as further discussed in Chapter Two. At this point, we can simply note that since ancient times people around the world have attached spiritual significance to water, flowing water, and rivers, and that this belief in the spiritual significance of rivers contributed to the view that public rights on rivers were granted to mankind by God (or the gods,) and therefore are not revocable by human governments, as discussed earlier. This in turn contributed to the legal view that running water is owned by the whole community, and that water rights are a temporary right to use a community resource, but are not actual ownership of the water. This

[14] **Institutes of Justinian:** Translated by John Baron Moyle, available as an e-book from Amazon Digital Services.

[15] **Cyrus the Great confirming the right to travel:** *Human Rights* by Prakash Talwar, Isha Books 2006. See also www.farsinet.com/cyrus.

[16] **Hindu origins of baptism:** *The World's Religions: Our Great Wisdom Traditions* by Huston Smith, HarperOne 1991.

view continues today, as will be discussed in the following pages.

River uses during the development of Europe

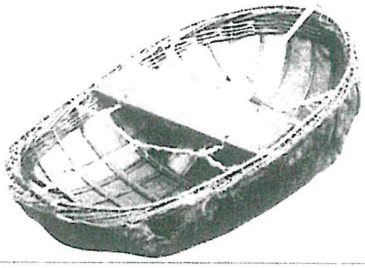
In the centuries following the decline of the Roman empire, river use continued to be an important part of life in Europe. Large rivers such as the Rhine, the Danube, and the Thames, as well as countless smaller rivers, carried the products of the land to buyers elsewhere. As in earlier times, loads of grain and barrels of wine, as well as ore, stone, and lumber, were typically sent by river from sources upstream to cities and seaports downstream. As in earlier times, boatmen got their boats back upstream by rowing, poling, *cordelling*, or using a small sail when practical.

The practice of cordelling (described earlier) continued in parts of Europe into modern times. For example, for centuries numerous vineyards on the hillsides surrounding the Douro River in Portugal have grown the grapes used to make port wine. The new wine was traditionally carried down the river, though sizeable rapids, in barrels lashed to the decks of wooden rowboats called **rabelos,** to the city of Porto, which is near the mouth of the river at the Atlantic Ocean. There the wine, after further aging, was loaded onto ships and taken to buyers abroad, especially in England. The river boatmen, after delivering the barrels to Porto, *cordelled* the empty boats back up the river to await the next harvest. It was not until the 1930s that the industry switched to transporting the barrels from the vineyards to the coast by truck.[17]

The port wine industry used small boats called **rabelos** until the 1930s, to transport barrels of wine down the Douro River.

After the decline of the Roman empire, fishing on rivers also continued throughout Europe, as it had since ancient times. People fished from the banks of rivers as well as from small boats. The sport of fly fishing was already popular in Europe by the 1400s, and books were published about it in the 1400s and 1500s.[18]

In Wales, for centuries river fishermen have used small one-man boats called *coracles*, which consist of a wicker frame covered with leather, propelled by a paddle. A coracle is light enough for a fisherman to carry on his back.[19]



Welsh fishermen have used **coracles** for many centuries.

River law during the development of Europe

Ancient law regarding public rights on rivers continued into the laws of the emerging European nations.

In 1265, the government of **Spain** published *Las Siete Partidas*, a document that is considered to be a foundation of law in Spain and Latin America. Reflecting the *Institutes of Justinian* and other ancient law, it confirmed public boating and fishing rights on rivers. It said that rivers belong to all persons in common. Regarding the banks of rivers, it said, "Although the banks of rivers are, so far as their ownership is concerned, the property of those whose lands include them, nevertheless, every man has a right to use them."[20] This reaffirmed the principle of a public *easement* to use the banks of rivers, even where the *ownerhip* of the banks is private, as stated centuries earlier in the *Institutes of Justinian*, discussed above.

In **France,** a classic treatise on French Civil Law by Jean Domat, published in 1694, also reflected ancient law, saying that rivers, as well as "the banks of rivers," are "public things," which "do not appertain to any particular persons." Instead, "it is the sovereign who regulates the use of them."[21] By the 1800s, French law held that rivers were "inalienable" public property, meaning public property that could never be granted to private owners. The legal view was, "The sole purpose of the inalienability is to assure that the property will remain in public use or service. It follows that any voluntary alienation or dismemberment of the property is void, unless the property has ceased to be part of the public domain before it was alienated."[22]

In **England,** the public used rivers freely in ancient times. After the invasion of William the Conqueror in 1066, some rivers and their banks were fenced off by the Norman kings, for private use by the kings and noblemen. However, public boating and fishing rights were restored by the *Magna Carta* in 1215. This famous document limited the power of the kings, and required the kings to recognize

[17] **Wine transport by river in Portugal until the 1930s:** See www.ivp.pt.

[18] **Fly fishing books, 1400s and 1500s:** *The Treatyse of Fysshynge wyth an Angle* by Juliana Berners 1496 (England.) *The Little Treatise on Fishing* by Fernando Basurto 1539 (Spain.) *The Art of Angling* by William Samuel 1577 (England.) In *American Fly Fishing, A History* by Paul Schullery, Lyons&Burford 1987.

[19] **Coracles:** *Trout and Salmon Fishing in Wales* by George Agar Hansard 1923, re-published by Nabu Press 2010, page 145.

[20] **Every man has a right to use the privately-owned banks:** *Las Siete Partidas*, section 3.28.6 (S. Scott, translator and editor, 1931.)

[21] **French law in 1694:** *The Civil Law in its Natural Order* by Jean Domat 1694, page 150 (L. Cushing ed. 1850.)

[22] **French law in the 1800s:** *Droit Civil Francois* by Aubry and Rau 1838, Sec. 42.

public rights in a number of matters. Regarding rivers, it required the king to remove *kydells*, or *weirs*, (small dams intended to hold fish in one stretch of river,) from the rivers thoughout all England, so as to clear the streams for the free passage of fish as well as people.[23]

A well-known treatise on English common law was prepared about the year 1250, by the legal scholar Henry de Bracton. It affirmed public rights on rivers, citing the *Law of Nature* ("natural law") as the source of these public rights. It said, "By natural law these are common to all: running water, air, the sea, and the shores of the sea."[24] This echoed the *Institutes of Justinian* (as discussed earlier.)

In later centuries, English law continued to affirm both a "freedom of passage" and a "liberty of fishing" in rivers.[25]

By the 1600s, the legal view in England was that the beds and banks of rivers could be privately owned by the adjacent landowner, yet still be subject to two *servitudes*, one belonging to the king, and the other belonging to the people in general, thereby allowing public boating and fishing.[26] The law did not see these public rights on private land as being contradictory.[27] Note that this was different from the French legal view that the banks of rivers were necessarily public land, but it was essentially the same as the earlier Spanish view, reflected in *Las Siete Partidas*, (as well as the ancient view, reflected in the *Institutes of Justinian*,) that the banks must be open to public use, even where they are privately owned.

By the 1800s, the legal view in England was that the government held boating and fishing rights on rivers *in trust* for the use of the people.[28] This was essentially the same as the view that developed in the United States, as we will see later in this chapter.

River uses in ancient North America

Archeologists estimate that people have been living in the Americas for over ten thousand years. Archeological evidence indicates that humans lived and hunted wild game at Monte Verde (near present-day Puerto Montt, Chile,) about 14,000 years ago, and near present-day Clovis, New Mexico about 13,000 years ago.[29] Archeologists have long theorized that people migrated from Asia to North America by walking across the Bering Strait, when the level of the ocean was lower than it is today. However, there is increasing evidence that a number of people migrated from Asia to North America in kayaks or similar watercraft. The Inuit (Eskimo) people have long been capable of crossing the Bering Strait, and in fact the Yupik people still live on both sides of the strait. Explorers in the early 1900s found that among various tribes in Alaska, across Canada to Labrador, and in South America, in places where the ancient kayaking and fishing cultures appeared to have changed the least over time, details of the kayaks and paddles themselves were quite similar to those found in Asia, suggesting that prehistoric kayaking fishermen migrated from Asia to North America.[30]

The word *kayak*, usually viewed as an Eskimo word, appears to be derived from an earlier Turkish word, *kayik* or *qayiq*. (Turkish people first appeared in locations far to the east of modern-day Turkey, and a Turkish people, the Yakuts, still live in eastern Siberia.)[31] The Turkish word *kayik* also appears to be related to (or be the source of) the ancient Greek word for a small boat, *kaiki*, a word still used for small recreational boats among the Greek islands in the Mediterranean.[32]

People have been using kayaks for fishing, fowling, and transportation for thousands of years, in northern Asia, North America, and Greenland.

Today, among Spanish and Mayan speakers throughout Central America, the common word for a kayak or dugout canoe is *cayuco*, sounding much like *kayak*, *kayik*, and *kaiki*. Consequently, the term *kayak*, in its various forms, may be an ancient term, of nearly worldwide use, still used today.

[23] **Magna Carta:** The first *Magna Carta, The Great Charter of King John*, signed at Runnymede in 1215, chapter 33.

[24] **English law in 1250:** *On the Laws and Customs of England (De Legibus et Consuetudinibus Angliae)* by Henry de Bracton, Bk. I, ch. XII section 6, at 57 (Twiss ed. 1878).

[25] **English law in later centuries:** *Mare Clausum*, by Selden, Bk. II, ch. XXI, at 355 (Gent. Ed. 1663) ("As a freedom of passage, so also wee finde that a libertie of Fishing hath been obtained by Petition from the King of England.")

[26] **Public use of privately owned beds and banks:** *De Jure Maris* by Sir Matthew Hale, written in 1667 and published in 1786. ("The *jus privatum* that is acquired by the subject [the riparian landowner], either by patent or prescription, must not prejudice the *jus publicum* wherewith public rivers and the arms of the sea are affected to public use.")

[27] **Public rights on private land along rivers:** *Lord Fitzwalter's Case*, [K.B. 1611] 1 Mod. 105, Eng. Rep. 766. (Not contradictory for the soil to be privately owned "and yet the river being common to all fishers.")

[28] **Rivers held in trust by the government for public use:** *A Treatise on the Law of Waters* by H. Woolrych, page 437 (2d ed. 1851).

[29] **People in the Americas 14,000 years ago:** For example, see *World Prehistory: A Brief Introduction* by Brian M. Fagan, Prentice Hall 2007.

[30] **Kayaks and paddles in Asia and North America:** *The Bark Canoes and Skin Boats of North America* by Edwin T. Adney and Howard I. Chapelle, Smithsonian Inst. 1964, page 195 (comparing kayaks and paddles in Asia and North America.)

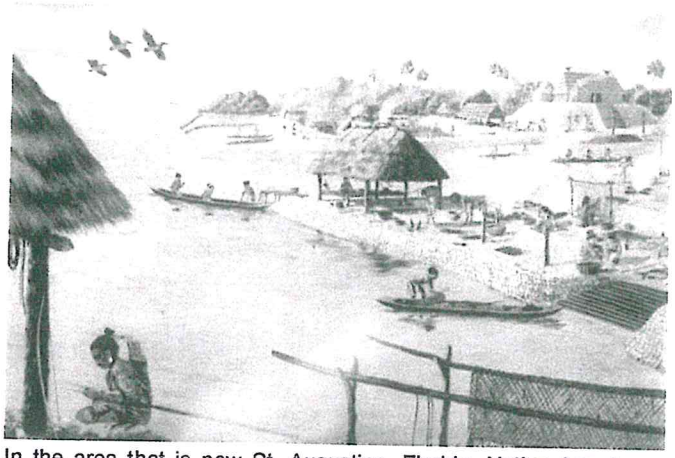
[31] **Turkish for kayak:** "Starting from Greenland" at idiocentrism.com/kayak.htm.

[32] **Greek for kayak:** "The history of traditional Greek boats" by Maggie Makris, www.helium.com/items/1447035-greek-kaiki-boats-traditional-greek-boats.

A skeleton found along the Columbia River in 1996 (named "Kennewick man" after the nearby city of Kennewick, Washington) appears to be that of an *Ainu* man who lived about 9,000 years ago.[33] The *Ainu* or *Jomon* were an ancient people who lived in Japan before the Japanese. They used kayaks and similar craft to fish and hunt for seals and walruses. Isotope measurements of the skeleton, completed in 2012, indicate that the man most likely lived off a diet of marine mammals.[34] In view of his diet and background, and the long stretches of harsh terrain between Japan and Washington, it appears to be very unlikely that this Ainu man (or his ancestors) got to the Columbia River area by walking overland. It appears to be much more likely that he (or they) traveled along the coast of the Pacific by kayak or similar craft.[35]

Various pyramid-building civilizations flourished in North and Central America starting about 3,000 years ago, in the region stretching from what is now Illinois to what is now Panama. The pyramids they built were strikingly similar to those of ancient India and neighboring countries, suggesting migrations across the Pacific. The remains of these pyramids can still be seen at places such as Cahokia Mounds State Historic Site in Illinois, Chichen Itza in Mexico, Tikal in Guatemala, and several other locations. These ancient civilizations also built cities of stone, somewhat similar to those of ancient Greece and Rome.[36]

As in ancient Babylon and ancient Egypt, transportation by river played a key role in the development of these American civilizations. Numerous ancient records, illustrations, and archeological digs confirm that these civilizations used canoes and similar craft on rivers for trade and for fishing, and that fish were a principal source of food.[37] As archeologists have excavated ancient American ruins in any one location, they have often found various small items (such as jewelry and tools) that could only have come from other, distant civilizations. These findings show that there was trading over great distances between American civilizations.[38]



In the area that is now St. Augustine, Florida, Native Americans once fished, canoed, and built temples on small pyramids.

These civilizations built cities and towns at strategic points along rivers. Today, the Cahokia Mounds are large earthen mounds, located a few miles east of St. Louis, Missouri. However, from about 700 to 1400 A.D., they were stone-faced pyramids, in a city of perhaps 10,000 to 20,000 people, located on a bend in the Mississippi River, just downstream from its confluence with the Missouri. This was an ideal location for a capital of commerce, carried by canoes, covering a large region in what is now the midwestern United States.[39]

River law in ancient North America

Based on ample acheological evidence, it is clear that transportation and trade using canoes on rivers, and fishing on rivers, were common practices among the ancient North American civilizations, in what is now the United States, Mexico, and Central America. It is clear that these civilizations had already been using canoes and similar craft on rivers, for transportation, trade and fishing, for thousands of years before the arrival of Europeans.

In other words, at the time that the *Institutes of Justinian* were being published in the Roman empire (regarding ancient law that confirmed public rights to use rivers in the civilizations around the Mediterranean,) the same sorts of public rights on rivers had also long been confirmed by law and custom among the civilizations of North America.[40]

Today, there are still a few "windows" into the canoeing and fishing lifestyle of ancient North America. For example, the *Kuna* people still maintain their traditional homeland, *Kuna Yala*, and their own nearly-autonomous government, within the nation of Panama. Their homeland includes the San Blas Islands in the Caribbean, and the adjacent section of the mainland coast, up to the Continental Divide (which is not far from the ocean in that area.) They still use the same type of dugout canoes, for fishing and transportation, as were used in ancient America (and were used throughout

[33] **Kennewick Man:** *The First Americans: The Pleistocene Colonization of the New World,* Nina G. Jablonski, Editor, Univ. of California Press 2002, page 105.
[34] **Isotope measurements:** By Douglas Owsley, mnh.si.edu/kennewickman.
[35] **Kennewick man came by kayak:** *In the Wake of the Jomon, Stone Age Mariners and a Voyage across the Pacific* by Jon Turk, International Marine McGraw-Hill, 2005 (likely that Ainu people kayaked along the coast rather than walking overland, Japan to Alaska, based on research and modern-day trips.)
[36] **Pyramids and cities of stone:** *Ancient Maya: The Rise and Fall of a Rainforest Civilization* by Arthur Demarest, Cambridge University Press 2005.
[37] **Trade and fishing on rivers in ancient America:** *Archeology of Ancient Mexico and Central America: An Encyclopedia,* edited by Susan T. Evans and David L. Webster, Routledge 2000, page 115 (Ancient Mayan city of *Cerros*, next to present-day Corozal in Belize, controlled trade routes on the Rio Hondo and New River, from Yucatán to Petén. The ancient city, now in ruins, is surrounded by a stone-lined canal, where traders in canoes loaded and unloaded cargo.)
[38] **Trading over great distances:** Note striking similarities between the jewelry and pottery designs of North American tribes such as the Navajo and South American tribes such as the Mapuche in Chile. The items traded between North and South America in ancient times may not have been carried the whole way by the same traders, but could well have been taken in several stages by different traders. In any event, there was definitely trading between civilizations.
[39] **Cahokia Mounds:** See the well-illustrated web site at cahokiamounds.org.
[40] **Public rights on rivers in ancient America:** "Aztec and Maya Law: An Online Exhibit and Bibliography," Tarlton Law Library, University of Texas. (tarlton.law.utexas.edu/ exhibits/Aztec/index.html.)

much of the ancient world on other continents.) They paddle up and down the rivers of their region, as well as from island to island along the coast. They use the same sorts of pointed paddles as those that were used by ancient kayakers in Asia, but are not typically seen elsewhere. Today, they are astute traders, setting an annual tribal-wide price for their coconuts, which they trade to factories in nearby Colombia for use in foods and cosmetics. It is evident that this trading tradition among American tribes originated in ancient times.[41]

Dugout canoes are still used today by the Kuna people in Panama.

Ironically, the *Kuna* territory lies scarcely fifty miles from the Panama Canal, the modern "crossroads of the world," where large ships carry trade between the Atlantic and the Pacific, and where North America and South America meet. This modern "crossroads of the world" is very near the place where America's ancient culture, which involved trading by canoe, still thrives today, essentially unchanged.

The European discovery of America

It is likely that the first Europeans to see the coasts of North America were Norse explorers. Shortly after the year 1000 A.D. they made several voyages from Norway to the east coast of what is now Canada. As they anchored their sailing ships in sheltered bays along the coast, they were met by native tribal people paddling kayaks. At first the explorers traded peacefully with the natives, but soon there were misunderstandings and fighting. The explorers returned to Europe and reported their findings, but in those days most Europeans apparently regarded the reports as exagerration or fiction, or as not relevant to daily life.[42]

These and subsequent explorers reported that the native people made their kayaks by building frames of sticks or animal bone, then covering them with the skins of seals or other animals. They used these kayaks when fishing, and also to hunt, using spears or traps, for seals and other animals. They used the fur of these animals for clothing, and the meat for food.

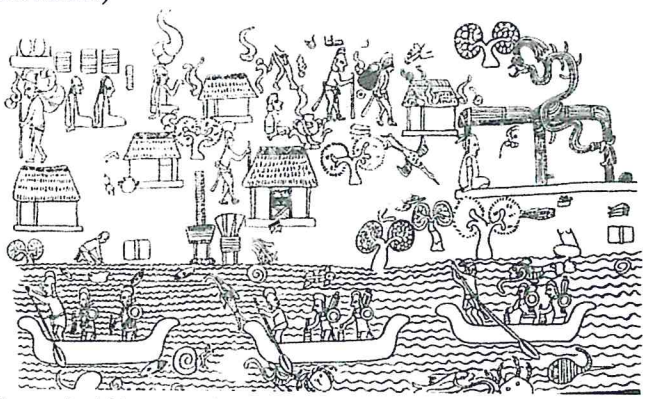
They also used kayaks for transportation. They put food, furs, other freight, and even their children inside these kayaks, then paddled them across cold, windy waters in relative safety.[43]

As mentioned earlier, it appears that native peoples in North America had already been living in this manner, using kayaks and other types of canoes, for thousands of years before the Norse explorers arrived.

Of course, the more publicized European discovery of America was nearly 500 years later, when Christopher Columbus and his crew sailed in 1492 from Spain to what is now the Bahamas. On these islands they found native *Taino* people paddling small boats, calling them by a term that the Spanish explorers transliterated as *canoa*, from which English and other European languages got the word *canoe*.[44]

Miscommunication was common between natives and European explorers, so the Spanish explorers may have been hearing a local variation of the word *cayuco*, which in turn appears to be a variation of *kayak*, *kayik*, and *kaiki*, as noted earlier. Consequently, the two modern words *canoe* and *kayak* may have come from the same ancient root word, which was similar in numerous places around the world.

In 1502, on a later voyage continuing further south, Columbus encountered a large Mayan trading canoe along the coast of what is now Honduras. The canoe was carrying goods such as jade, salt, cotton, and cacao beans. (*Cacao* is a Mayan word, adopted in Europe as *cocoa*.) This was the first known contact between the European and Mayan civilizations (and the first known European experience with chocolate.)[45]



The ancient Maya used canoes for transport, fishing, and trading.

In 1520, a Spanish military expedition led by Hernán Cortés conquered the capital of the Aztec civilization, in what is now Mexico. The capital was located on an island, surrounded by a shallow lake routinely used by canoes, in the area that is now Mexico City. Remnants of the ancient lake are still visited by tourists, in small, flower-decorated

[41] **Kuna life and trading:** *The Art of Being Kuna: Layers of Meaning Among the Kuna of Panama* by Mari Lyn Salvador, University of Washington Press 1997.

[42] **Norse explorers around 1000:** *The European Discovery of America, The Northern Voyages* by Samuel Eliot Morison, Oxford University Press 1971, pg. 53.

[43] **Ancient kayak uses:** *Nanook of the North* by Robert Flaherty, Windmill Books 1971, based on a film from the 1920s showing Eskimo families who were still living in the ancient manner at that time.

[44] **Natives found by Columbus:** *The Tainos: Rise and Decline of the People Who Greeted Columbus* by Irving Rouse, Yale University Press 1993.

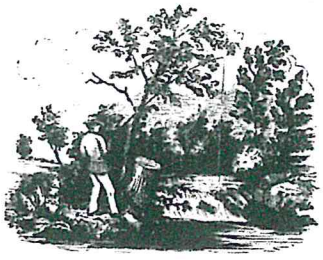
[45] **Mayan trading canoes:** "The Mayan Navigators," mayadiscovery.com/ing/history/navigators.htm. "The Maya and Cacao," authenticmaya.com/cacao.htm.

boats, at the present-day Xochimilco gardens on the outskirts of Mexico City.[46]

During these same years, Spanish explorers in the tropical regions of Central and South America found the natives making log rafts for use on rivers from the lightweight wood of a certain tropical tree. In Spanish, a raft is a *balsa*, so they called this wood *balsa* wood. (Today, it is typically used to make model airplanes.)[47]

The first major European exploration of what is now the United States was in 1538, when the Spanish explorer Hernando DeSoto landed in Florida, with 620 men and 223 horses, and made a military-style overland expedition through what is now Florida, Georgia, Alabama, Mississippi, Arkansas, and Louisiana. When the expedition reached the banks of the Mississippi River, thousands of natives (who had heard of the coming invasion) were massed along the opposite shore. Natives in full war regalia repeatedly paddled past the expedition's camp in brightly-painted war canoes, shooting volleys of arrows. The expedition later crossed the river, and continued further west, but many men died, and the survivors returned home in tatters. DeSoto himself died, and his crew "buried" his body by putting it in a hollow log and sending it down the Mississippi.[48]

In 1576, an expedition from England, led by Martin Forbisher, sailed to the east coast of what is now Canada, visiting some of the same areas that the previously-mentioned Norse explorers had seen nearly six centuries earlier. Again, the explorers were met by natives in kayaks, as the earlier Norse explorers had been. Again, at first the explorers traded peacefully with the natives, but later there were disputes and fighting. This time, however, the explorers captured a native and his kayak, and took him back to England. There, this displaced man demonstrated his kayaking, fishing, and fowling skills in various public performances. His performances were then portrayed by English artists in pictures, which were published in books distributed in England and other European countries at that time.[49]



Fishing along the banks of rivers was customary in colonial and early American times.

River uses in colonial America

Colonial fishing. The first colonists in what is now Virginia and neighboring states, during the 1600s, survived largely on fish and game until they could grow and harvest crops. Fish were plentiful in rivers and the ocean. Native tribesmen showed them how to fish successfully, which allowed the colonists to survive.[50]

Later, printed advertisements in Europe, designed to attract additional colonists to America, portrayed fish as being quite plentiful in America, and canoes as being a common and convenient way to catch them. In those times there were devastating famines in parts of Britain, Ireland, and elsewhere in Europe. People feared starving to death. The promise of plentiful fish was a powerful draw for people to emigrate from Europe to America.[51]

In later generations, when colonists were less concerned about mere survival, fishing for sport became common. In Philadelphia, there were at least five different fishing clubs by 1750, and books had been published about fly fishing techniques.[52]

Colonial canoeing on rivers. As colonists moved inland, they found that much of the land was thickly forested and nearly impassable.[53] In many areas, rivers were the only practical routes of transportation. Again, the natives showed them how to use canoes, which could be paddled both upstream and downstream, and could be carried around obstructions in rivers. Canoeing on rivers became a key element in the westward movement of settlers.[54]

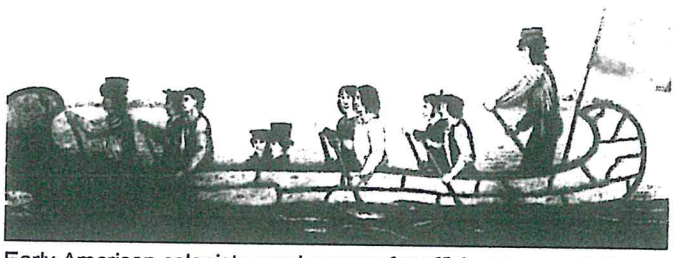
Colonial logging on rivers. Colonists often used rivers to transport lumber. They felled trees in the mountains, then cut them on the spot into shorter logs, then floated the logs down rivers to crews waiting at large eddies downstream, who pulled them out of the river and used them to build new settlements.

They even used small creeks to transport logs. They would stockpile the logs along a creek during the low-water months, then send them downstream when the time of high water arrived. Note that rapids and waterfalls were not much of an obstacle for colonial loggers. They simply ran the logs down the rapids and over the waterfalls, then retrieved them from eddies further downstream.[55]

Colonial fur trading. When European colonists arrived in America, native tribes had already been trading in furs for several thousand years, typically transporting them in canoes on rivers. The colonists simply linked this existing commerce to European markets. French entrepreneurs

[46] **Cortés and the Aztecs:** *The Spanish Invasion of Mexico, 1519-1521* by Charles M. Robinson, Osprey Publishing 2004.
[47] **Balsa wood:** *Spanish Word Histories and Mysteries* by the Editors of the American Heritage Dictionaries, Houghton Mifflin Harcourt 2007, page 23.
[48] **DeSoto on the Mississippi:** *Tales of the Mississippi* by Ray Samuel, Leonard Huber, and Warren Ogden, Pelican Publishing, Gretna, 1955 and 2000, pg 2 to 9.
[49] **Native kayaker taken to England:** *The European Discovery of America, The Northern Voyages* by Samuel Eliot Morison, Oxford Univ. Press 1971, page 142.
[50] **Fishing by first colonists:** *Ocean Planet* by Peter Benchley and Judith Gradwohl, Harry N. Abrams Publishers/Smithsonian Institution 1995, page 163.
[51] **Plentiful fish as a draw for emigration:** *Ocean Planet* (just cited) page 164.
[52] **Colonial fly fishing books:** *The Compleat Angler* by Izaak Walton 1676. *The Art of Angling* by Richard Brookes 1740.
[53] **Thickly-forested land:** *The Loggers* by Richard L. Williams, Time-Life Books 1976, page 28.
[54] **Colonial canoeing on rivers:** *The Rivermen* by Paul O'Neil, Time-Life Books 1975, page 19.
[55] **Logging on rivers with rapids and falls:** *The Loggers* (just cited) page 104.

started the shipping of American furs to Europe around 1600, followed by English and American traders. Fur traders traveled by canoe on rivers, taking small manufactured goods such as knives, tools, beads, and mirrors to native tribes, where they traded these items for the furs of beaver, buffalo, and other animals. Then they transported the furs in canoes on rivers back to cities, where they fetched good prices. Most of the furs were then loaded on ships bound for Europe, where they were made into hats and coats for buyers in London and Paris and other cities. From about 1600 to the mid-1800s, furs were in high demand both in colonial American cities and in Europe, and fur trading was an important American industry.[56]



Early American colonists used canoes for efficient transportation.

A French "mountain man" was called a *coureur de bois*, literally a "runner of the woods," while a fur trader was called a *voyageur*, because the trade involved long-distance "voyages" on water, by canoe. The fur traders carried or *portaged* their canoes and furs overland between rivers when necessary to complete a route. (To *portage* means to "carry" in French.)

French fur traders founded Montreal in 1642. In 1673, French explorer Louis Jolliet and Jacques Marquette, a priest, led a long expedition from Montreal south. (For comparison, note that this was when Louis XIV was expanding the palace of Versailles back in France, and Dutch forces were retaking New York from British forces.) The expedition consisted of only seven men—five Frenchmen and two Algonquin tribesmen. They made the entire trip in two birch-bark canoes. From Montreal, they paddled along the shores of the Great Lakes, then upstream on the Fox River, a river that flows into Lake Michigan. Then they portaged (carried) their canoes across the local divide, to the headwaters of a small river that flows into the Mississippi, and paddled downstream hundreds of mile to what is now the state of Mississippi. They had numerous peaceful interactions with the native tribes, even though they were visiting some of the same areas where many men had died while fighting the natives on the earlier DeSoto expedition. They then paddled the canoes hundreds of miles back *up* the Mississippi, and home to Montreal, all without losing a single man.[57]

They traveled by canoe in the same manner as typical French-Canadian fur traders of the time. To modern readers, paddling a canoe upstream for hundreds of miles may sound nearly impossible, but native tribesmen had already been doing it for thousands of years. A lifetime of paddling made it more feasible for these people, but it also turns out that rivers in relatively flat country, such as most of the Mississippi, make nearly continuous bends. One ancient technique was to paddle up the eddy on the inside of a bend in the river, then ferry across the river, then paddle up the eddy on the inside of the next bend. In this manner, much of the paddling time was spent with little or no opposing current, and sometimes there was even a helpful upstream current in the eddy. Another technique, where the bends of the river were particularly close together, was to portage the canoe across the "isthmus" at the narrowest point between bends, then paddle *downstream* to the next narrow isthmus, then repeat the process, thereby making an overall trip *up* the river, even though the paddling itself was a series of *downstream* segments, interspersed with portages.

Montreal became the largest collection point for the northeastern fur trade, since it was located near the confluence of the St. Lawrence and Ottawa rivers, downstream from the Great Lakes and a short distance from the Atlantic. French fur traders also founded New Orleans in 1718. It became the main export city for the midwestern fur trade, since it was located near the mouth of the Mississippi River. They founded St. Louis in 1764, and it became the main collection point for the western fur trade, since it was located near the confluence of the Mississippi and the Missouri rivers. Note that St. Louis is just a few miles from where the canoe trading and pyramid-building city at Cahokia Mounds had flourished centuries earlier.

By the time the American colonies declared their independence from Britain in 1776, French fur traders were already in full operation in what is now the midwestern and western United States. Today, their legacy lives on in place names such as Coeur d'Alene, Idaho, and the Cache la Poudre River, in Colorado.[58]

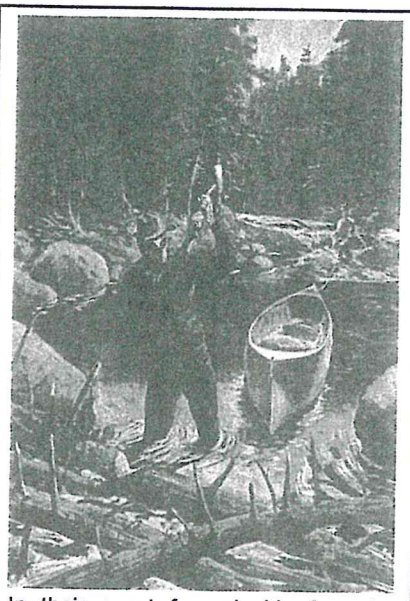
Today, novelists and movie makers often focus on conflict and warfare between native tribes and European settlers. Conflicts were indeed common in the 1800s, but during colonial times, in the 1600s and 1700s, traders usually found that the tribes were eager to trade furs for knives, tools, jewelry, and so on. Trading relationships were therefore valued by both the tribes and the European traders. Both tribesmen and traders considered it desireable for trader men to marry tribal women, and there were numerous such marriages, producing numerous children who were half tribal and half European.

[56] **European-American fur trading:** *The Forts of New France in Northeast America 1600-1763* by René Chartrand and Brian Delf, Osprey Publishing 2008.

[57] **Marquette and Jolliett expedition:** See vivid illustrations in *Marquette & Jolliet: Quest for the Mississippi* by Alexander Zelenyj, Crabtree Publishing 2006.

[58] **French fur trade:** *French Fur Traders & Voyageurs in the American West* edited by LeRoy R. Hafen, Univ. of Nebraska Press 1965 and A.H. Clark 1995.

Note that these two centuries of peaceful trading, during the 1600s and 1700s, were simply a continuation of the trading tradition that had already flourished for thousands of years among various North American tribes and civilizations, in places stretching from Illinois to Panama, as mentioned earlier.



In their quest for valuable furs, fur traders hacked through logjams and lined canoes through rapids.

River law in colonial America

Colonial governments consistently affirmed public boating and fishing rights. In 1641, the Massachusetts Bay Colony adopted the *Massachusetts Declaration of Fundamental Liberties,* which affirmed public rights to fish and fowl on the "great ponds" (lakes in that area,) along with the freedom to walk through uncultivated private land to do so.[59] Laws of the colony of Pennsylvania, enacted from 1700 to 1768, prohibited weirs that would block the movement of fish on rivers, and confirmed public rights to fish on rivers.[60] Note that these colonial laws reflected similar provisions in *Magna Carta,* which had been signed into law about five centuries earlier, as discussed previously.

In colonial times, people living inland from the coastal cities were dispersed, and they had few commercial food sources. There were no paved highways, and no trucks bringing food to local grocery stores. Canoeing, fishing, and fowling on rivers were important methods of obtaining food, and were a part of everyday life for many people.

Colonial views regarding public rights to use rivers were influenced by the pre-existing customs and legal views of the tribes. (As noted above, relationships between tribes and colonists were generally positive.) The general view was that canoeing, fishing, and fowling on rivers were an important part of life, and that public rights to do these things were undeniable. Conequently, the law during colonial times confirmed public rights to canoe, fish, and fowl on rivers.

Founding principles of American river law

Laws of Nature. The founding fathers of the United States reaffirmed the overall premise of ancient law that the *Laws of Nature* are the source of human rights and liberties. The Declaration of Independence says that people "are endowed by their Creator with certain unalienable rights; that among these are life, liberty, and the pursuit of happiness."[61] This echoed the ancient view, as expressed in documents such as the *Institutes of Justinian,* that public rights and freedoms are granted by God (or the gods,) and therefore cannot be revoked by human governments, so that they are unalienable (now spelled *inalienable.*) It should be noted that many Americans fought and died in the Revolutionary War to uphold these public rights and freedoms, and to protect them from future encroachment.[62]

The Commerce Clause. After winning independence from Britain, the states functioned for several years as a confederation of independent countries. It was not until 1787 that delegates from the various states met to draft the U.S. Constitution. A strong motivation for calling the Constitutional Convention was the need for an overall policy regarding commerce, which had become chaotic as states set up import duties and other impediments to interstate trade, in an effort to collect revenues and protect business for their own citizens. Consequently, there were few objections to the adoption of the "Commerce Clause" of the Constitution, which empowered Congress "to regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes."[63] The main commerce with the Indian tribes at that time was the *fur trade,* which was already centuries old, as discussed earlier. The fur trade was an important source of much-needed cash for the fledgling United States, since furs fetched good prices from buyers in London and Paris, as noted earlier. The fur trade was borne mainly by canoes on rivers. In effect, the Commerce Clause asserted national authority over navigation on rivers in canoes and similar craft. In subsequent decades, the Commerce Clause was to play a key role in the development of river law (and Constitutional law) in the United States, as discussed later herein.

Rivers navigable in canoes shall be "forever free." In the very first Act of Congress, Congress addressed the status of rivers in U.S. territory west of the original thirteen colonies, saying, "the navigable waters leading into the Mississippi and Saint Lawrence, and the carrying places between the same, shall be common highways, and forever free, as well to the inhabitants of the said territory as to the citizens of the United States, and those of any other states that may be admitted into the confederacy, without any tax,

[59] **Public rights in the Massachusetts Bay Colony:** *Inhabitants of W. Roxbury v. Stoddard,* 89 Mass. 158 (1863).

[60] **Public rights in the Pennsylvania colony:** Cited in *Carson v. Blazer,* 2 Binn. 475, 4 Am. Dec. 463, pages 474-476 (Pa 1810).

[61] **Endowed by their Creator:** Declaration of Independence, first paragraph.

[62] **Public rights and the Revolutionary War:** See discussion by the U.S. Supreme Court in *Martin v. Waddell,* 41 U.S. 367 (1842) page 414 (discussed later herein.) See also *A People's History of the United States,* by Howard Zinn, Harper Collins 1980, page 78.

[63] **Adoption of the Commerce Clause:** U.S. Constitution, Article I, section 8, clause 3, as discussed in *The Oxford Companion to the Supreme Court of the United States* edited by Kermit L. Hall, Oxford University Press 1992.

impost, or duty therefor."[64] In 1796, in a law governing territory that would become future states, Congress again declared that "all the navigable rivers, creeks, and waters" within the territory "shall be deemed to be and remain public highways."[65]

Fur traders traveled upstream to trap beaver and other animals that lived along small creeks in the mountains. Then they took the furs back downstream to distant buyers.

At that time, the common types of watercraft on rivers were canoes and other small, human-powered craft, used in the fur trade and for other transportation, as noted earlier. A canoe is about the heaviest watercraft that can be reasonably *carried* overland from one river to the next, and such carrying (or *portaging*) was a common practice in the fur trade. Therefore these laws about "navigable rivers" and "creeks," and "the carrying places between the same" refer to navigation *in canoes*, not in larger craft. (Steamboats and motorboats had not been invented yet.)

Describing the rivers in question as the tributaries of "the Mississippi and St. Lawrence" may at first seem like an odd limitation, until one considers that this description covered virtually all of the rivers flowing in the territory that was claimed by the United States at that time (as well as a number of rivers in lands that were claimed by France and Spain.)

These Acts of Congress have not been repealed. The U.S. Supreme Court has repeatedly cited them as being a fundamental source of public rights on rivers in the United States today.[66]

The Lewis and Clark expedition. In 1803 Congress made the Louisiana Purchase from France, buying the vast region that is now the Midwest. The next year Congress funded the Lewis and Clark expedition, to officially explore this vast area by canoe, as well as additional lands further west to the Pacific. President Thomas Jefferson (who had previously written the Declaration of Independence) personally planned the expedition, and appointed Lewis and Clark to lead it. (Indeed, there is evidence that Jefferson had secretly planned the expedition even before the Louisiana Purchase, when the lands to be explored were still claimed by the French.) The fur trade was an important source of foreign cash for the young nation, as noted earlier, and part of the motivation for the Lewis and Clark expedition was to ensure that rivers used in the fur trade would remain open to U.S. traders, who competed for trading routes (and "market share") with French Canadian traders.[67]

The Lewis and Clark expedition traveled across North America by canoe, meeting tribes that carved elaborate dugout canoes.

It may be difficult for modern readers to comprehend the demand for furs in Europe in the early 1800s, and the resulting importance of the fur trade in those times, in what is now the Midwest. Fur trade historian Hiram Chittenden explains, "For forty years [after the Louisiana Purchase] the people of the United States were at a loss to know what to do with their new possession. It was not yet needed for settlement... The single attraction that it offered in a commercial way was its wealth of furs, the gathering of which became, and for a long time remained, the only business of importance in this entire region."[68]

The Lewis and Clark expedition also hoped to find a canoe route to the Pacific Ocean, hopefully with only a short portage over the Continental Divide—perhaps not much longer than the portage between a tributary of the St. Lawrence, and a tributary of the Mississippi, that had been used by the Jolliet and Marquette expedition over a century earlier, and had been in frequent use since then.

After departing from St. Louis, the expedition canoed upstream along the Missouri River, using the various techniques to go upstream as described earlier. Then they continued up smaller tributaries. Then they carried their canoes and gear over the Continental Divide, (which turned

[64] **"Forever free:"** *Northwest Ordinance of 1787*, reenacted Aug. 7, 1789, chapter 8, 1 Stat. 50.

[65] **"Remain public highways:"** Act of May 18, 1796, chapter 29, section 9, 1 Stat. 464, 468.

[66] **U.S. Supreme Court regarding rivers being "forever free" and remaining "public highways:"** *The Montello*, 87 U.S. 430 (1874) page 440. *Economy Light & Power*, 256 U.S. 113 (1921) pages 119 and 120.

[67] **Fur trade as a motive for the Lewis and Clark expedition:** *The Journals of Lewis and Clark*, ed. by Bernard DeVoto, Houghton Mifflin 1953, pgs. xxv and 89.

[68] **Fur trade was the only business of importance:** *The American Fur Trade of the Far West* by Hiram Martin Chittenden, Stanford University 1936 and 1954, also University of Nebraska Press 1986, in two volumes, over 900 pages.

out to be long and arduous,) and canoed down small rivers to join the Columbia River, and onward to the Pacific Ocean. Near the mouth of the Columbia, they built log cabins and spent the winter. When warm weather returned, they canoed and portaged their way back to St. Louis, along roughly the same route. Throughout the expedition they collected many specimens of plants and animals, and they made official contact with numerous tribes along the way (informing the skeptical tribes that they were now under the dominion of the new U.S. government.)

As they canoed down the Missouri on the final leg of their trip back to St. Louis, they met no less than eleven parties of fur traders headed upstream.[69] As noted earlier, French fur traders had already been operating in much of that area for over a century, and tribes had been canoeing and trading on these rivers for many centuries before that.

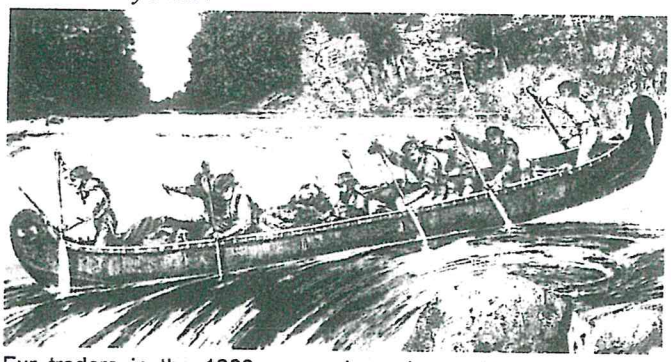
In other words, the Lewis and Clark expedition was not the initial human exploration of an untouched wilderness. Instead, it was an official fact-finding expedition, sent by the young U.S. government, to document the resources, and claim dominion, over lands that had already been occupied by tribes and pyramid-building civilizations for thousands of years. The laws and customs of these tribes and civilizations had long confirmed public rights to trade and travel on rivers by canoe, and to fish and fowl on rivers, as noted earlier. The laws of the new U.S. government essentially reaffirmed those ancient rights, although U.S. law based them on European principles such as the *Laws of Nature* and the *Institutes of Justinian,* rather than on Native American custom or Mayan codices. Either way (European or American) the net result was about the same—public rights on rivers were confirmed.

River uses in the early 1800s

It so happens that one can start from a point in western Pennsylvania, less than 200 miles from the Atlantic Ocean, and travel entirely by river to numerous points throughout the Midwest, and even to Montana. In the early 1800s, rivers provided both an important means for settlers to travel west, and also a means for them to earn a living once they got there. They could sell the products of their farms, and the surrounding forests, to commercial boatmen, who took these products by river to buyers in cities such as Cincinnati, St. Louis, Memphis, and New Orleans. From New Orleans, products were taken in ocean-going ships to buyers on the Atlantic coast and in Europe.[70]

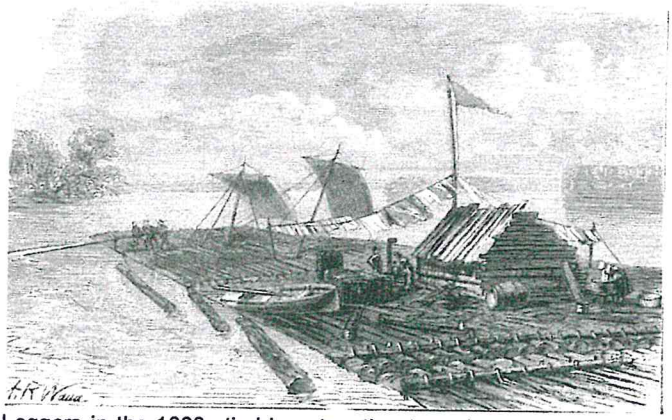
Canoes were the basic watercraft used in this commerce. As mentioned earlier, canoes were paddled upstream as well as downstream, and were carried around obstructions in rivers, as well as from one river to another.

Another basic watercraft at that time was a **log raft.** These were loaded with furs, dried meat, grain, coal, metal ore, and other raw materials, then steered downstream with long sweep oars. These heavy rafts made a one-way trip, and the logs themselves were sold as lumber at their destination. For some traders, the logs themselves were the main product, while the cargo carried on top was almost incidental. A number of historic houses in New Orleans, still standing today, were made of wood that came from Minnesota, transported down the Mississippi in the form of log rafts during the 1800s. Log rafts such as these were key elements in the classic American novels *Tom Sawyer* and *Huckleberry Finn*.



Fur traders in the 1800s canoed on rivers with rapids in their search for valuable furs, which were sold in America and Europe.

Another common boat was a **flatboat,** a boat made of thick wood boards, consisting of a flat bottom and sides. Often a roof was added over part of the boat. These wooden barges were lighter and more maneuverable than log rafts, and they provided somewhat safer transport for cargo, livestock, and passengers. Like log rafts, they were typically used for a one-way trip downstream, then sold at their destination for lumber.



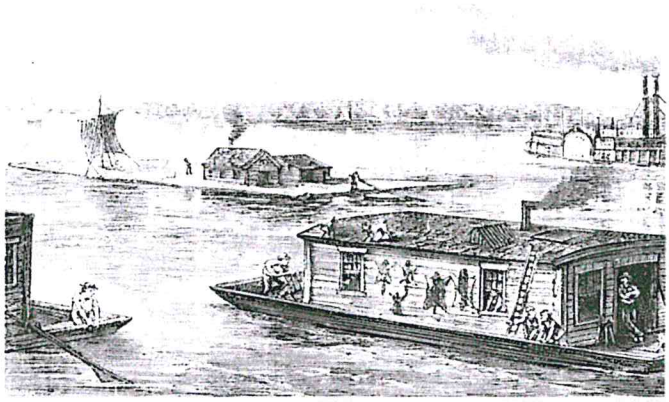
Loggers in the 1800s tied logs together to make log rafts, to float the logs down rivers to market, sometimes with cargo on top.

A **mackinaw** was a long, narrow flatboat with some curvature at the ends, to make it faster and more maneuverable. With a crew of four at the oars, and a fifth man handling the rudder (which was a long sweep oar,) these boats could cover over 100 miles a day when going downstream.[71]

Also common were **keelboats,** which were wooden boats made with a rounded hull and a keel, more like the boats

[69] **Met fur trade parties:** *Journals of Lewis and Clark* (just cited) pgs. 467 to 478.
[70] **Settlers, river use:** *The Rivermen* by Paul O'Neil, Time-Life Books 1975, p. 20.
[71] **Log rafts, flatboats, and mackinaws:** *Western Rivermen, 1793-1861* by Michael Allen, Louisiana State University Press 1990.

typically used on the ocean at the time. Keelboats were faster and more maneuverable than flatboats and mackinaws, and were designed for multiple trips. On the trip downstream they often carried heavy raw materials, similar to flatboats and rafts. On the trip upstream, they carried lighter, more valuable manufactured items, such as guns and tools, which were readily sold to frontier settlers. They moved upstream in four ways, briefly mentioned earlier: First, by men, mules, or oxen pulling them with a rope from the bank, called *cordelling*. Second, by men pushing off the bottom of the river with poles, while walking along the deck of the boat from bow to stern. Third, by rowing, with anywhere from four to twelve pairs of oars. Fourth, by hoisting a sail, to take advantage of common upstream winds in the afternoon. Often two or more of these methods were used at the same time. These methods had been used in Europe and elsewhere since ancient times, as discussed earlier.[72]

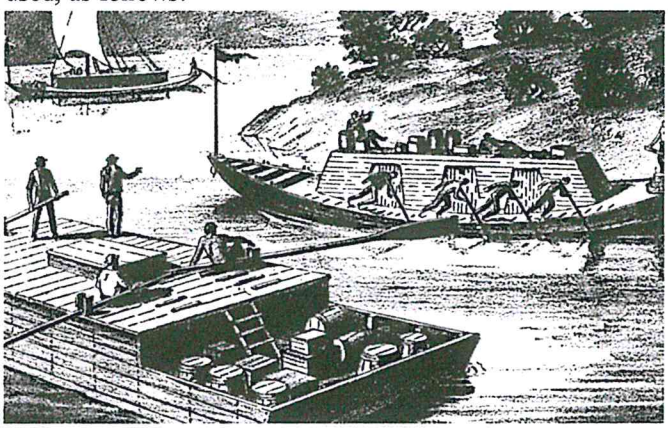


Flatboats, log rafts, steamboats, canoes, and other craft navigated American rivers through the 1800s.

To modern readers, these methods of moving upstream sound too slow and arduous, but as noted earlier, it was simply not feasible to transport large loads on the bumpy, rutted roads of those times. There were very few paved roads until the early 1900s. Note that the heavier loads moved *downstream*, from the interior of the country to the coast. Only the lighter loads moved upstream.

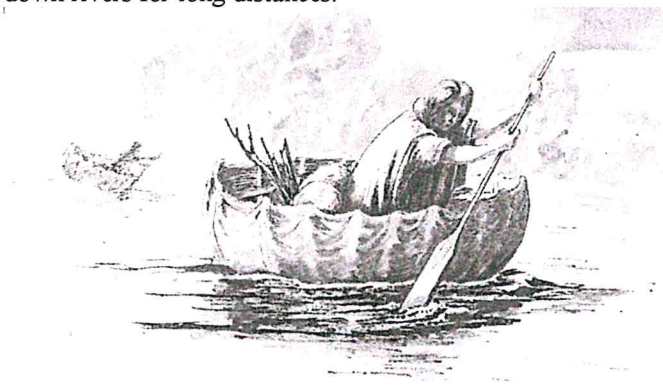
Modern readers may also wonder how perishable merchandise was preserved on these long river voyages. The meat was dried, and the furs were tanned. These and similar products were then compressed into bundles and tightly wrapped with protective leather covers. The presses used to make these bundles can still be seen at various "living history" sites in the Midwest and the West.[73] The resulting bundles could withstand rain, sun, dust storms, and other rigors during their long journey to distant buyers. If the vessel sank in the river, these bundles would float, so with luck they could be recovered from an eddy somewhere downstream.

The fur trade in the early 1800s. During the early 1800s the western fur trade grew quite large, as fur trading companies based in St. Louis hired numerous teams of men to head up the Missouri and its tributaries and acquire large quantities of furs from tribes.[74] Various watercraft were used, as follows:



In the foreground, a flat boat heads downstream with a sweep oar as a rudder. In the middle ground, men push off the bottom with long poles to propel a keel boat upstream. In the background, another keel boat catches some helpful wind.

Bull boats. Throughout the Midwest, early fur traders found the native tribes using *bull boats*. These consisted of a frame made of flexible branches, then covered with the hide of a bull buffalo. They were often built along the banks of a river, then used for a one-way trip down the river carrying furs and other products. Fur traders copied this technique, also making bull boats and using them to float their furs down rivers for long distances.



A frame of flexible branches, covered with the hide of a bull buffalo, made a bullboat.

Bull boats were quite similar to *coracles*, the rounded boats which had been used for fishing in Wales for centuries, as mentioned earlier. The great similarity between these two watercraft fueled the widespread belief, now discredited, that Welsh explorers in the 1100s, led by Prince Madoc, settled in the Midwest, and that their descendants

[72] **Keelboats:** *The Keelboat Age on Western Waters* by Leland D. Baldwin, University of Pittsburgh Press 1980.

[73] **Presses used to make bundles:** See the photo of the "pelt press" at sangres.com/colorado/national-parks/bents.htm

[74] **Fur trade during the 1800s:** *The American Fur Trade of the Far West* by Hiram Martin Chittenden, Stanford Univ. 1936-1954; Univ. Nebraska Press 1986.

were the members of the Mandan tribe (whose skin color was lighter than that of other tribes.)[75]

Some fur traders made "giant bullboats," large **skin canoes,** 25 to 30 feet long. A framework of willow poles was lashed together, then covered with buffalo hides sewn together, and the seams were sealed with buffalo tallow and ashes.[76]

Dugout canoes were also common in the fur trade at this time. They were typically carved from the trunk of a large cottonwood tree. They were usually about two inches thick at the bottom, and one inch thick at the rim, and they had solid partitions of wood inside, as bulwarks. They were usually propelled by two men paddling forward, and a third man steering by means of a long paddle trailing from the stern. In other words, they were essentially the same as the dugout canoes that had been used on many of the same rivers, and on other continents, for thousands of years previously.

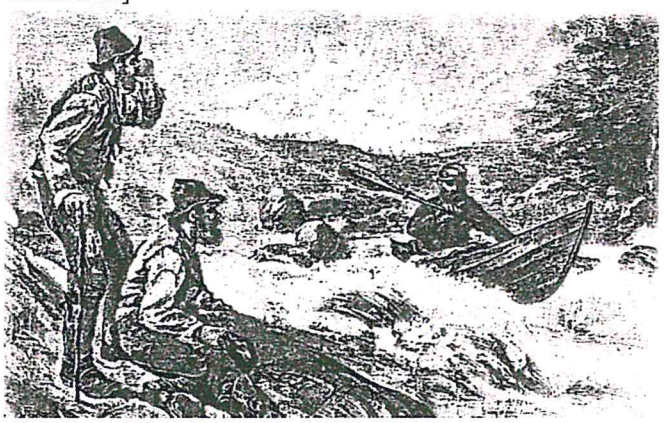
Two dugout canoes fastened together, a short distance apart from each other, and decked over with rough planks, made a catamaran-like boat that the voyageurs called a **pirogue** (a French word for a small boat.) Large pirogues were about thirty to forty feet in length, and six to eight feet wide. They were steered by an oarsman who stood in the stern and used a sweep oar. To go upstream, they were propelled by oars, or towed by a line from shore, typically covering ten to fifteen miles a day. They covered more miles when going downstream, with the help of the current. A square sail was also used when feasible.

Fur traders in the 1800s carved dugout canoes from the trunk of a large tree, as people have done for thousands of years.

The voyageurs also used a type of **log raft** which they called a **bateau** (a French word for a boat.) Built of cottonwood logs, this heavy and rather unwieldy craft was typically ten to twelve feet wide and fifty to seventy feet long. A bateau was usually equipped with sweep oars, poles, lines, and sometimes a sail.[77]

Traders in this region also used **keelboats,** which were typically *cordelled* upstream by some thirty or forty voyageurs walking along the bank, as explained earlier.

A traveler in the 1830s described this assortment of river activity, writing an account of his trip through what is now Montana. He wrote that near the confluence of the Flathead and Bitterroot rivers, "we found a party of young half-breeds, who had returned from their fall hunt, and brought in their furs for delivery." (Note that the "half-breeds" would have been the sons of fur trader men and their tribal wives, bringing furs for delivery to a fur trader.) He also reported that nearby there was "quite a village of Indians," where "most of the families have light canoes, with which they glide about on the river, and gather roots and berries." Later he saw canoes carrying "whole families and their baggage down the stream with surprising velocity." He noted that the canoes "were managed by the squaws, who, with their paddles, direct their course with great steadiness, astonishing rapidity, and apparent ease and dexterity." Later he saw groups of fur traders on the Bitterroot River. "A long line of Mackinaw boats, loaded with furs and peltries, were proceeding down the river, the whole surface of which was covered [with mackinaws, canoes, and similar watercraft.]"[78]



Kayaks were used during the 1800s by natives and prospectors.

Kayaks were also used during these years on rivers, and in the commercial hunting of sea otters—which was yet another component of the fur trade—along the Pacific coast, from California to Alaska, from the late 1700s to the 1840s. Sea otters have the thickest fur of any animal, and these valuable furs came to be known as "soft gold," fetching high prices in markets ranging from China to London. Native tribesmen had been hunting sea otters in small quantities for

[75] **Welsh coracles and Mandan bull boats:** *Prince Madoc, founder of Clark County, Indiana* by Dana Olson, self-published 1987, and "Madoc" at madoc1170.com (these accounts are generally discredited by historians.)

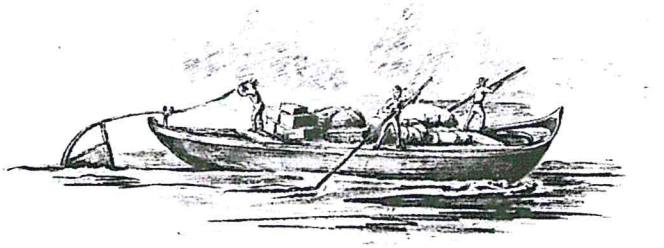
[76] **Large skin canoes:** "The Skin Canoes of the Great Plains and Rockies" by James A. Hanson, *The Museum of the Fur Trade Quarterly,* Vol 16 No 1, 1980.

[77] **Dugout canoes, pirogues, bateaux:** See descriptions and illustrations in *Original Contributions to Western History* ed. by Nolie Mumey and illus. by Inez Tatum, The Westerners 1952, pages 180-187. Also *West of the River* by Dorothy Gardiner, Thomas Crowell Company 1941, pages 34-35.

[78] **Eye-witness account of river traffic:** *Life in the Rocky Mountains, A Diary of Wanderings on the sources of the Rivers Missouri, Columbia, and Colorado, 1830-1835* by Warren Angus Ferris, reprinted 1983 by The Old West Publ. Co.

centuries. Russian entrepreneurs started acquiring these furs from the natives in the late 1700s, then founded Fort Ross, California, in 1812, as a base for hunting sea otters. The sea otter population soon shrank due to over-hunting, and the Russians left Fort Ross in 1842. Their legacy lives on in the name of the Russian River in California, which reaches the coast near Fort Ross, and is a popular canoeing and kayaking river today.[79]

As noted earlier, relations between European fur traders and native tribes were generally peaceful in colonial times, but as more Europeans poured into tribal areas during the 1800s, tensions increased. Greater use of alcohol as a trade item added to the conflicts and fighting. Some fur companies hired their own crews of trappers to gather furs, thereby cutting the tribes out of the deal, which the tribes greatly resented. Finally, the growing competition for land and resources led to actual warfare.[80]



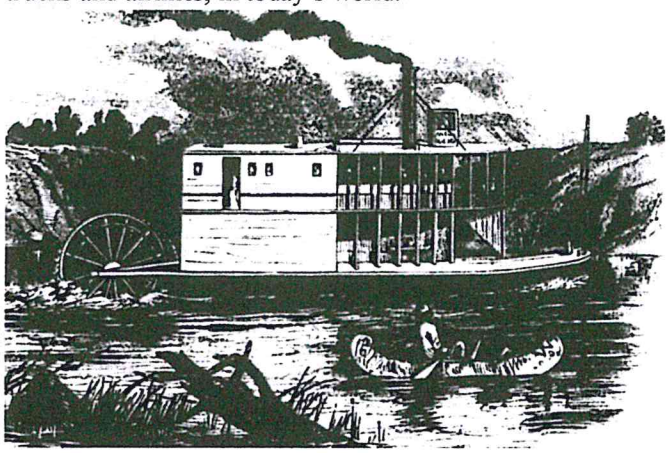
A keelboat with a large rudder, loaded with cargo.

The steamboat era. In 1812, the first American steamboat went by river downstream from Pittsburgh to New Orleans. It then operated on the Mississippi River, between New Orleans and Natchez, Mississippi, for less than two years, until it hit a *snag* in the river and sank. Snags are fallen trees, half buried in the riverbed. Their branches break off and leave sharp stumps sticking up toward the surface of the water. If a steamboat hit a large snag, it was likely to sink, so snags were a fundamental problem for early steamboats, preventing widespread use. It was not until 1829 that the first "snag boat" was built, a sort of "catamaran steamboat" that could straddle a snag then hoist it up on deck with a crane. Through the 1830s, the federal government paid for snag boats to clear snags on the Mississippi and other rivers. Steamboats then became more common on rivers in the 1840s. They traveled up the Missouri River as far as Montana, and went up numerous smaller rivers.[81]

On these smaller rivers, steamboats often got stuck on sandbars. To free themselves, they used a system of timbers and cables, winched by their engines. This process was called *grasshoppering* because it resembled a giant grasshopper.[82]

Steamboats became a major form of long-distance public transportation, for passengers and freight, in the mid-1800s. Although novels and movies typically dramatize the role of covered wagons in the settlement of the Midwest and the West, historians estimate that in reality, more settlers came west on steamboats, and other smaller boats, than in covered wagons.[83]

Even during their heyday, steamboats did not replace canoes, log rafts, flatboats, and keelboats on rivers. The fur trade was still active, using canoes, throughout the steamboat era. Logs were still typically taken down rivers in the form of log rafts, not as freight on steamboats. Flatboats and keelboats still hauled heavy loads, doing so more economically than steamboats. Steamboats were mainly for passengers and lighter freight that needed to get to their destinations more quickly, at a higher cost. The situation was somewhat analogous to the difference between highway trucks and airlines, in today's world.



Some steamboats were large and ornate, but others were small and practical. They frequently ran aground but quickly backed off.

The development of river law in the early 1800s

River law in the U.S. was shaped by U.S. Supreme Court decisions from the early 1800s to the present, which in turn were influenced by certain state supreme court decisions. The following discussion of these decisions is lengthy, because these decisions are the foundation of public rights on rivers today. Readers who want to more quickly proceed to actual answers about current public rights on rivers (including which rivers are navigable in which senses) can skim over the following discussion and proceed to Chapters Three and Four. However, the answers in those chapters necessarily refer back to the following landmark court decisions. In addition, readers who must respond to the claims of lawyers who oppose public rights on rivers will find that it becomes necessary to know what the following

[79] **Kayaks and fur trade:** "History of the Russian Settlement at Fort Ross, California," at parks.sonoma.net/rosshist.html

[80] **Fur trade and warfare in the 1800s:** *The Fur Trade of the American West, 1807-1840* by David J. Wishart, University of Nebraska Press 1979 and 1992.

[81] **Snag boats and steamboat history:** *Tales of the Mississippi* by Samuel, Huber and Ogden, Pelican Publishing, Gretna, 1955 and 2000, pages 25-53.

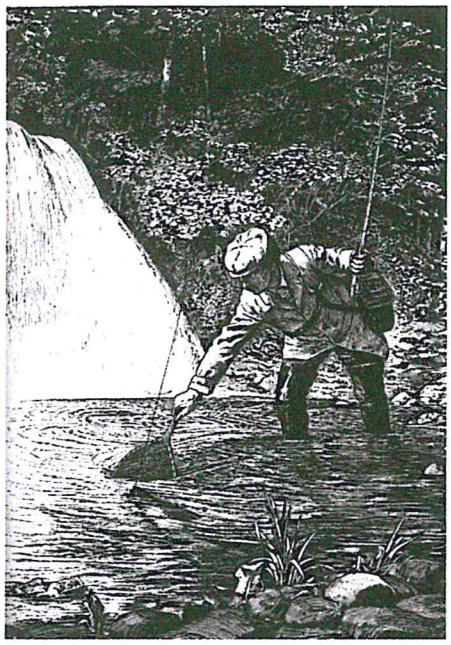
[82] **Grasshoppering:** Described in *Original Contributions to Western History* by Nolie Mumey and illus. by Inez Tatum, The Westerners 1952, page 209.

[83] **Settlers coming west by steamboat and other smaller boats:** *The Rivermen* by Paul O'Neill, Time-Life Books 1975.

decisions were actually about, and what they actually concluded.

1821, *Arnold v. Mundy*, public fishing rights and the Public Trust Doctrine.[84] This New Jersey Supreme Court decision strongly influenced later decisions by the U.S. Supreme Court. The owner of land near the mouth of the Raritan River had staked off an area of submerged land under shallow water, adjacent to the land he owned on the shore, and had attempted to exclude the public from fishing or harvesting oysters in this area of shallow water. He traced his claim back to an original grant from the king of England (a "crown grant.")

The Court upheld public rights to fish in that area, including harvesting oysters off the bottom, citing three fundamental sources for these public rights: "The law of nature, which is the only true foundation of all social rights," as well as "the civil law, which formerly governed almost the whole civilized world, and which is still the foundation of the polity of almost every nation in Europe," and finally "the common law of England, of which our ancestors boasted, and to which it were well if we ourselves paid a more sacred regard."



Fishing on rivers was popular in America throughout the 1800s.

Summarizing the history of the issue, the Court said that public rights on rivers had been "a great principle of the common law" in England since "ancient times," and although some medieval kings had encroached upon these "common rights," Magna Carta was "nothing but a restoration of common right." The Court said that the landowner's attempt to deny public rights to fish in these waters, and to harvest oysters off the bottom of the water, was tantamount to claiming that "Magna Carta was a farce."

Today, legal scholars cite this decision as "the foundational public trust decision in the United States."[85] It was the beginning, in the United States, of the *Public Trust Doctrine*, a doctrine of law holding that waterways are held in trust by the government for public use. Its actual origins, in England and the ancient Mediterranean civilizations, were many centuries older, as the Court itself explained (and as discussed earlier herein.)

1824, *Gibbons v. Ogden*, federal jurisdiction over river traffic within one state.[86] As mentioned earlier, when delegates met to draft the U.S. Constitution, interstate trade had become chaotic, as various states imposed import duties on goods entering their state, so their was little controversy about the *Commerce Clause* of the Constitution, which granted federal authority over commerce among the states and with native tribes. For decades thereafter, however, the prevailing legal view was that states should govern most industry and commerce, not the federal government.

Steamboats were the first widespread mechanized transportation in America. They played a fundamental role in the gradual transformation of the U. S. economy from a collection of local economies, involving agriculture and local manufacturing, to a national economy, involving large-scale manufacturing and interstate movement of merchandise. They continuously transported people and goods from state to state. Consequently, steamboat operations raised basic constitutional questions about the proper roles of state and federal authority over the developing interstate economy.

Gibbons v. Ogden, decided during the early years of the steamboat era, was the first U.S. Supreme Court decision to apply the Commerce Clause to a dispute involving state versus federal authority. The State Legislature of New York, in an effort to induce a steamboat company owned by Mr. Ogden to operate in New York, had granted his company the exclusive right to operate steamboats within the state. Mr. Gibbons later started competing with Ogden, also operating steamboats within the state. Ogden then sued to prevent Gibbons from operating. Ogden argued that federal jurisdiction should not apply in the matter, since both steamboat operations were operating entirely within one state, without crossing state lines.

The U.S. Supreme Court disagreed, holding that the state government's exclusive grant to Ogden was "repugnant to that clause of the constitution of the United States, which authorizes Congress to regulate commerce," rather than the states. The Court said, "The power of regulating commerce extends to the regulation of navigation. The power to regulate commerce extends to every species of commercial intercourse between the United States and foreign nations, and among the several States. It does not stop at the external boundary of a State."

This decision confirmed federal jurisdiction over traffic on rivers, including traffic that did not cross state lines. It

[84] ***Arnold v. Mundy,*** 6 N.J.L. 1, 10 Am. Dec. 356 (1821). See at: fas-history.rutgers.edu/clemens/NJLaw/arnold1821.html.

[85] **Foundational public trust decision:** Described as such in *Water and Water Rights*, 1990 Ed. Updated 2001, section 29.01.

[86] ***Gibbons v. Ogden,*** 22 U.S. 1 (1824).

was also instrumental in later confirming federal jurisdiction over other commercial and industrial activities, unrelated to rivers, including commercial activities that did not cross state lines.

In subsequent years, rivers that were subject to this federal jurisdiction, under the Commerce Clause of the Constitution, came to be called *navigable for Commerce Clause purposes*.

In other words, *Gibbons v. Ogden* was a landmark decision not just in river law, but in overall Constitutional law. It established the principle that navigation is a national concern, not a matter of state by state discretion. The steamboats and flatboats of that era have now been largely replaced by other river craft such as rafts and kayaks, but the principle that state governments cannot restrict navigation remains the same.

1842, *Martin v. Waddell,* confirmation of the Public Trust Doctrine.[87] The facts in this case were quite similar to those in the New Jersey case of *Arnold v. Mundy*, discussed above: A waterfront landowner sought to prevent the public from harvesting oysters off the bottom of the shallow water adjacent to his private land, near the mouth of the Raritan River. As in the earlier case, the landowner claimed that his private ownership of these lands could be traced back to an original grant from the king of England (a "crown grant.")

Citing *Arnold v. Mundy*, the U.S. Supreme Court confirmed public rights to fish and harvest oysters off the bottom. The Court quoted, with approval, a passage from the English legal treatise *De Jure Maris*, written in 1667 (cited earlier herein) which said, "the common people of England have, regularly, a liberty of fishing in the sea, or creeks or arms thereof, as a public common of piscary." (A *piscary* is a "fishing place.")

The Court said, "the shores, and rivers and bays and arms of the sea, and the land under them," were "held by the king as a public trust," and therefore they continue to be "held as a public trust for the benefit of the whole community, to be freely used by all for navigation and fishery, as well for shell-fish as floating fish."

The Court also explained, "It is a matter of history, that the Stuarts, to encourage emigration, introduced into these colonies the broadest principles of British liberty. The fundamental constitutions of New York show this. The people have always appealed to Magna Carta as the foundation of American as well as British liberty."

The Court then discussed customs in the thirteen colonies that originally formed the United States, saying, "In all of them, from the time of the settlement to the present day, the previous habits and usages of the colonists have been respected, and they have been accustomed to enjoy in common, the benefits and advantages of the navigable waters, for the same purposes, and to the same extent, that they have been used and enjoyed, for centuries, in England. Indeed, it could not well have been otherwise; for the men who first formed the English settlements, could not have been expected to encounter the many hardships that unavoidably attended their emigration to the new world, and to people the banks of its bays and rivers, if the land under the water at their very doors was liable to immediate appropriation by another, as private property; and the settler upon the fast land thereby excluded from its enjoyment, and unable to take a shell-fish from its bottom, or fasten there a stake, or even bathe in its waters, without becoming a trespasser upon the rights of another." (A "stake" was used to hold a boat in position in shallow water while fishing or harvesting oysters.)

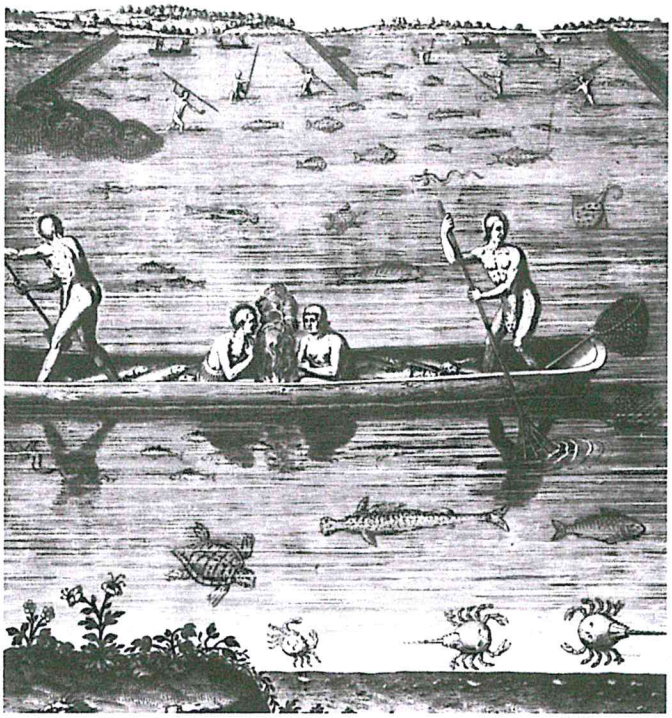
After citing the Law of Nature as the original basis for these public rights, the Court said, "The sovereign power itself, therefore, cannot, consistently with the principles of the law of nature, and the constitution of a well-ordered society, make a direct and absolute grant of the waters of the state, divesting all the citizens of a common right. It would be a grievance which never could be long borne by a free people."

Therefore, the Court concluded, it was of fundamental importance to uphold and maintain the public's "liberty" to boat and fish in shallow waters, such as the waters at issue in this case, adjacent to private land.

This principle that these permanent public rights are held by the state, "as a public trust for the benefit of the whole community, to be freely used by all for navigation and fishery," is the principle underlying the Public Trust Doctrine of law.

Regarding the Court's reference to "the Stuarts," the Stuart kings ruled England and Scotland through much of the 1600s and 1700s, during the era when the American colonies were established and populated with emigrants from Britain and elsewhere. These kings encouraged people to emigrate to the colonies, in order to expand the British empire and facilitate the extraction and transport of additional natural resources to Britain. Going to America as a colonist was a fundamental, permanent decision—few colonists ever returned home. It was also a life-threatening decision, due to the perils of the voyage itself and subsequent life on the frontier. Therefore it is appropriate to review what people in Europe heard about canoeing, fishing, and other uses of rivers in America during the 200 years of the colonial era, and how this influenced the difficult decision to emigrate. Many of them had seen pictures (or actual performances) of kayaking, fishing, and duck-hunting skills by tribal Americans, such as the tribal man brought to England in 1576 (noted earlier.) Many had also seen pictures, (such as the one reproduced herein, first published in 1590,) showing natives fishing in what is now North Carolina, surrounded by plentiful fish. Many had read reports from explorers such as Jolliet and Marquette, describing their canoe expedition from Montreal to Mississippi in 1673, and their peaceful contacts with native tribes. Many of them had seen furs, gathered by tribesmen in America, then sold to fur traders and brought to Europe.

[87] ***Martin v. Waddell,*** 41 U.S. 367 (1842).



A picture first published in 1590, showing natives fishing in what is now North Carolina, with plentiful fish. Such pictures were distributed in Europe to encourage people to colonize America.

In sum, people in Europe knew that in America fish and fowl, and fur-bearing animals, were plentiful, and that a common way to catch and transport this bounty was by canoe or kayak. They generally knew that there was a lot of thickly forested land in the interior of America, and that many settlers got around by canoe, and built homes and towns from logs that had been transported down creeks and rivers. Most colonists were aware of these things, to some degree, before they made the decision to go to America. For many colonists, opportunities to freely canoe, fish, hunt, and homestead new land, (in areas where transportation by canoe was common,) were a key part of the reason that they made the fundamental, life-changing decision to board a ship bound for America.

At the time of this Supreme Court decision, in 1842, the justices likely would have had fathers, grandfathers, or other relatives who immigrated to America, and who may have fought in the American Revolution. The hardships of emigration, and the fundamental importance of public rights to fish, fowl, and travel on rivers, would have been very real to them. This explains the passage in the decision about the Stuart kings encouraging emigration by ensuring "liberty," and the Court's conclusion that colonists "could not have been expected to encounter the many hardships that unavoidably attended their emigration to the new world... if the land under the water at their very doors" were later treated as private property.

Ownership of the land under the water: Note that the Court addressed both the matter of public *access* to the water and the land under the water, and also the matter of *ownership* of the land under the water. In England the legal view had been that the *king* owned such land, subject to public use, but in America, the Court said, "When the revolution took place, the people of each state became themselves sovereign; and in that character hold the absolute right to all their navigable waters, and the soils under them, for their own common use, subject only to the rights since surrendered by the Constitution to the general government."

In other words, the Court held that the land under navigable waters is owned by each state, and is held in trust by the state government for public boating and fishing. In subsequent years, rivers on which this principle applied came to be known as *navigable for title purposes*. (*Title* in this sense means *ownership*.) On such rivers, the bed of the river is typically owned by the state, not by the adjacent private landowner.

Today, the land along rivers that is under water, (all or part of the year) is often called the *submerged and submersible land*. The land that is above the level of the water (at least when the river is at "ordinary" levels) is called the *upland*.

Crown grants: Regarding the landowner's claim that his right to exclude the public could be traced back to an original "crown grant" from the king of England, the Court said, "The great principles of British liberty must be considered as accompanying this royal charter, and it must be construed accordingly." (The "royal charter" is the "crown grant.") The Court said that since rivers are "held by the king for the public benefit," a crown grant cannot turn them over to private control.

Displaying title 33, up to date as of 1/09/2023. Title 33 was last amended 1/09/2023.

Title 33 - Navigation and Navigable Waters
Chapter II - Corps of Engineers, Department of the Army, Department of Defense

ENHANCED CONTENT - TABLE OF CONTENTS

PART 329 - DEFINITION OF NAVIGABLE WATERS OF THE UNITED STATES

Authority: 33 U.S.C. 401 *et seq.*

Source: 51 FR 41251, Nov. 13, 1986, unless otherwise noted.

§ 329.1 Purpose.

This regulation defines the term "navigable waters of the United States" as it is used to define authorities of the Corps of Engineers. It also prescribes the policy, practice and procedure to be used in determining the extent of the jurisdiction of the Corps of Engineers and in answering inquiries concerning "navigable waters of the United States." This definition does not apply to authorities under the Clean Water Act which definitions are described under 33 CFR parts 323 and 328.

§ 329.2 Applicability.

This regulation is applicable to all Corps of Engineers districts and divisions having civil works responsibilities.

§ 329.3 General policies.

Precise definitions of "navigable waters of the United States" or "navigability" are ultimately dependent on judicial interpretation and cannot be made conclusively by administrative agencies. However, the policies and criteria contained in this regulation are in close conformance with the tests used by Federal courts and determinations made under this regulation are considered binding in regard to the activities of the Corps of Engineers.

§ 329.4 General definition.