

Review Group Management of Pike in Brown fisheries.

Introduction.

One of the main tenets for the Pro Pike lobby is that pike are native to Ireland and that being so they should be protected. They are fundamentally opposed to any and all pike control measures.

If pike control measures were not undertaken on Lough Corrib then, what state would one of the most respected salmonoid fisheries in Europe be in.?

There is a tendency within Ireland to reinvent the wheel. What is so wrong with steady as it goes with regards to Lough Corrib, why are we trying to break what is not broken.?

No Salmonoid angler has ever demanded the eradication of pike from the Corrib system as it is impossible once pike are introduced, at that point mitigation measures are all that can be done due to pike fecundity.

In 1898 when the first pike control measures were undertaken the architects of those mitigation measures knew this and managed the Corrib to reduce the pike impingement on salmonoid stocks not eradication.

That is why Corrib is still a destination for pike trophy hunters.

Lough Corrib and Mask have a similar size in surface area as Allen, Ree and Derg (not including Shannon River) if the Corrib and Mask become a Mixed fishery then there will be no salmonoid lake of any meaningful size within the Irish state.

The Pike Lobby knows what will happen to the Corrib if pike control stops and so do the Trout and Salmon anglers.

There can be no fudging the issue as in 2014 the blowing of smoke and Mushroom farming.

Pike Control measures in an International Context Best Practice.

Pike are native to Ireland and the debate ends there this is the pike angler mantra.

The above assertion by the pike lobby follows a paper written by Dr Pedreschi published

in 2014 that suggests that some Irish pike populations **may be Native to some parts of Ireland.**

At no point does Dr Pedreschi definitely state that pike are native to the Western Lakes but does say that pike in Lough Conn are a later introduction no earlier than the last 200 years.

Dr Pedreschi's conclusions have been cast into doubt by Dr Dennis Ensing from the Agri-Food and Bioscience Institute of Northern Ireland who suggests that Pike could have been a **exclusive human introduction.**

In a paper For the Canadian Marine Sciences.

A Biological Synopsis of Northern Pike By B Harvey 2009.

It States " The Concept of native or historic distribution needs some clarification because northern pike, as a species of importance for mankind, has probably been intentionally moved to new locations for hundreds of years. The population in **Ireland** for example, while often included as part of the native distribution was deliberately introduced in the sixteenth century; its very low genetic variability, probably reflects a genetic bottleneck at the time of transfer (Jacobsen et al. 2005) In fact, to Taylors (2004) definition of Native as exclusive of any human influence to northern pike would be difficult."

The pike lobby assertion that pike were always native to Lough Corrib and its tributaries eg. the Owenriff system, has to be considered **spurious** as no pike control measures were undertaken on this system prior to their recent introduction and the subsequent control and mitigation measures by Inland Fisheries Ireland.

In the Management Plan for Invasive Northern Pike in Alaska.

Prepared by Southern Alaska Northern Pike Control Committee.

Pike are referred to as an Aquatic Nuisance Species. (ANS)

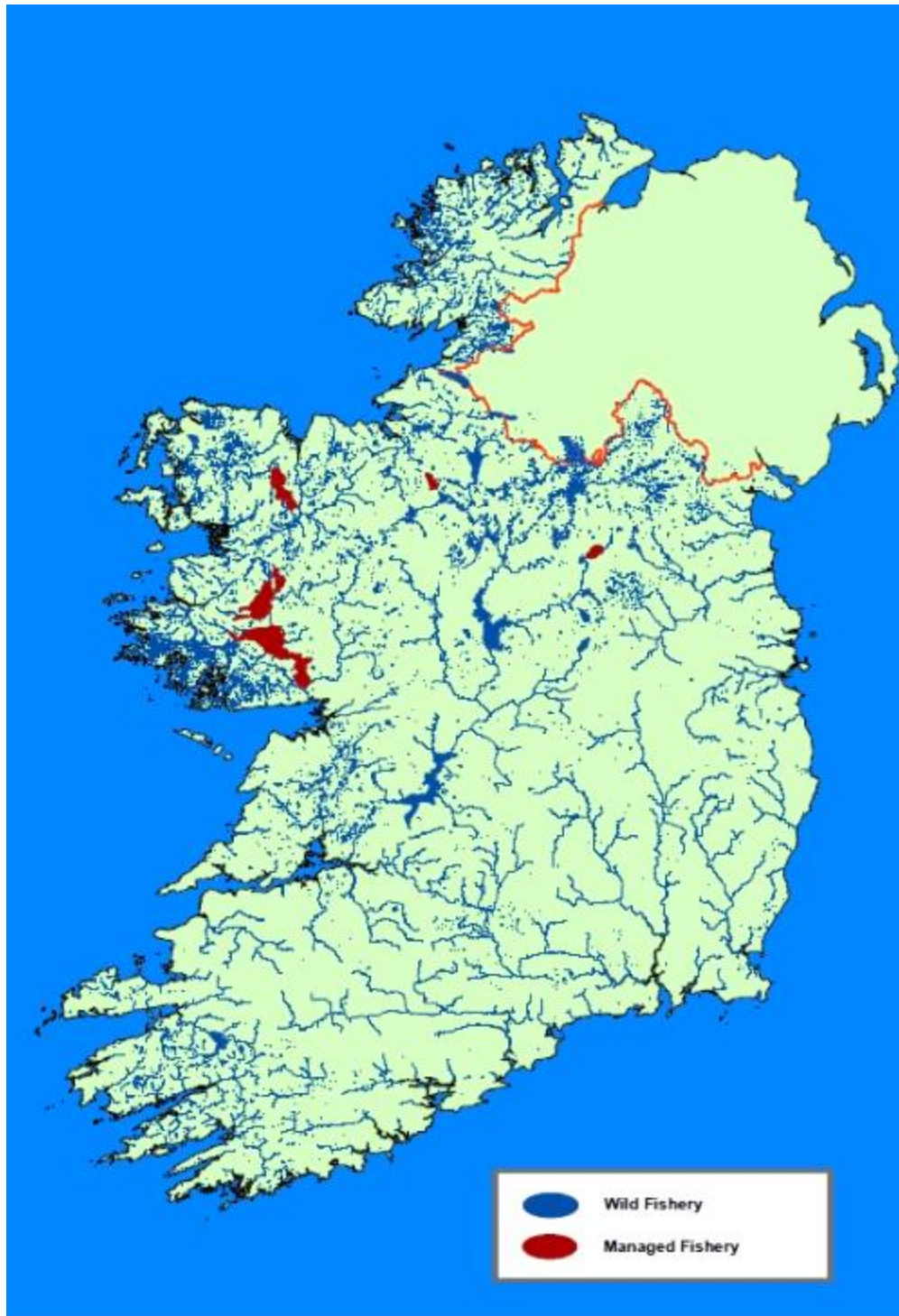
1.2 Northern Pike Introduction.

(International) states " Northern Pike occur in several countries outside their native range. In Europe pike were introduced to Spain Portugal and **Ireland** (Welcomme 1988)

In these countries, pike are a valued sport fish, although in Ireland there are concerns about their potential impacts to native trout."

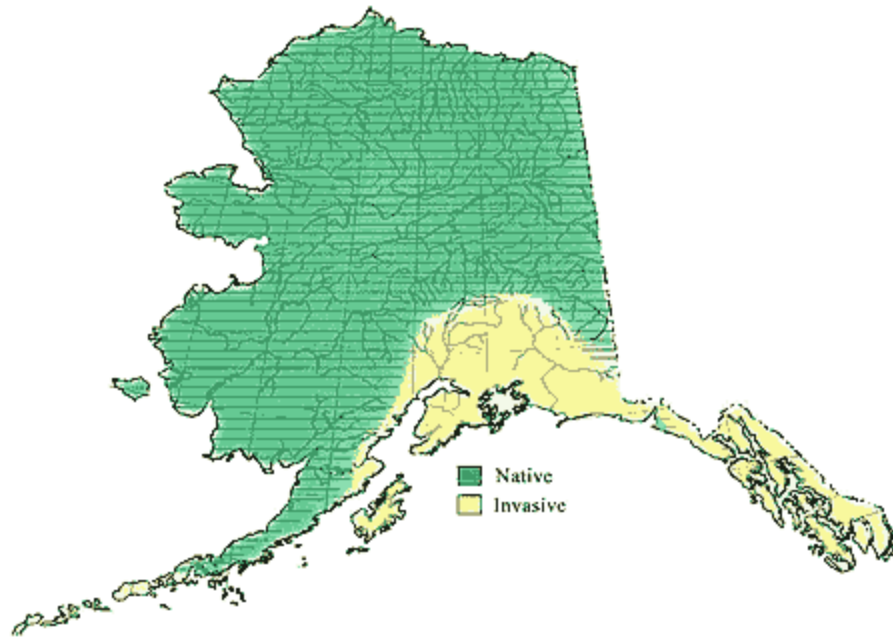


4lb Salmon recovered from the stomach of a Pike during a section 59. November 2016



The areas marked in red is where pike control measures are in operation note the rest of Ireland marked in blue. Very similar in Alaska where Salmonoid fisheries are surrounded by Mixed fisheries.

Also note the Large Lakes Allen, Ree and Derg Mixed fishery.



Alaska Pike Ranges.

The Global Invasive Species Database.

About the GISD

Introduction

The Global Invasive Species Database is a free, online searchable source of information about alien and invasive species that negatively impact biodiversity. The GISD aims to increase public awareness about invasive species and to facilitate effective prevention and management activities by disseminating specialist's knowledge and experience to a broad global audience. It focuses on invasive alien species that threaten native biodiversity and natural areas and covers all taxonomic groups from micro-organisms to animals and plants.

The Global Invasive Species Database (GISD) is managed by the Invasive Species Specialist Group (ISSG) of the IUCN Species Survival Commission. It was developed between 1998 and 2000 as part of the global initiative on invasive species led by the erstwhile Global Invasive Species Programme (GISP).

ALIEN RANGE

- [1][algeria](#)
- [1][ethiopia](#)
- [1][ireland](#)
- [1][isle of man](#)
- [1][madagascar](#)
- [1][morocco](#)
- [2][portugal](#)
- [1][spain](#)
- [1][tunisia](#)
- [1][uganda](#)

Management notes for this location

Management category: Control

Method:

Chemical

Harvey 2009

Notes: The two most common management methods for control of *E. lucius* populations are poisoning with rotenone, and culling

Impact

Mechanism: Predation, Hybridisation, Disease transmission, Competition.

It is stated in the above list Pike are Alien to Ireland.

Management Plan For Invasive Northern Pike in Alaska

Executive Summary

Outside its native range in Alaska, the northern pike (*Esox lucius*) is a destructive aquatic nuisance species (ANS). Pike are native north and west of the Alaska Range, but they do not naturally occur in Southcentral Alaska or in most Southeast watersheds. Most of the ecologically and economically important salmonid production in Alaska occurs in these locations. The proliferation of pike within these areas has become a fishery management concern because pike are voracious predators and prey heavily on juvenile salmonids. Outside its native range, pike have the potential to interfere with ecosystem function and destroy economically important fisheries. Due to illegal introductions and subsequent dispersal, pike are found in several Cook Inlet watersheds including the Susitna River Basin, the Anchorage Area, and watersheds on the Kenai Peninsula. Pike have also been illegally introduced to ponds within the city of Yakutat in Southeast. Pike have been problematic in other states as well as in Alaska, and several state agencies are trying to control or eradicate them. In Alaska, fishing regulations for pike have been liberalized in hopes that angling pressure will reduce introduced populations. In addition, netting programs have been implemented to document water bodies with pike and, in some cases, reduce their abundance. Though control netting is a good start, it is clear that more efficient control methods are necessary. Alaska Department of Fish and Game (ADF&G) plans to implement extensive public outreach programs to inform the public about the consequences of illegal pike introductions to both prevent further illegal introductions and gain public support for control actions. The specific objectives of this management plan are to:

1. Increase public awareness of problems associated with invasive pike.
2. Prevent future pike introductions and re-introductions to restored areas.
3. Initiate public processes to gain support for management actions.
4. Implement scientifically sound management options to control or eradicate pike.
5. Improve wild salmon and resident fish populations that have been impacted by pike.
6. Restore enhanced fisheries that have been reduced or eliminated by pike

ADF&G has outlined a process for accomplishing these objectives. Steps in this process include detecting populations of invasive pike, assessing habitat characteristics, proposing management alternatives for pike control, initiating a public process to communicate about control plans, implementing the chosen management action, and evaluating the success of the action. Interagency

coordination and public outreach through the Department's information and education (I&E) services will be major components of this process. Several management alternatives for pike control are described in this plan, but some of these may not be practical in Alaska. The management alternatives that are likely to be the most effective include dewatering and/ or using fish toxicants (i.e. rotenone) in closed systems. Research on management alternatives and pike control in open systems is needed and will likely guide the future direction of this management plan. The consequences of not implementing pike control activities would be immense. Therefore, it is necessary that ADF&G, collaborating government agencies and nongovernment organizations, and the public work together to reduce and/ or eliminate pike from waters where pike have been illegally introduced.

1.5 Status of Northern Pike In Alaska

Pike are not problematic within their native range in Alaska. Many lakes in the Interior are deeper than in Southcentral and provide better refuge for prey. Pike tend to remain in shallow vegetated areas.

Smaller fish can reside in the deeper, open areas of these lakes, and, therefore, avoid contact with pike. Interior fish species share a common evolutionary history, and prey species have adaptations for predator-avoidance in these lakes (Oswood et al. 2000). In Southcentral, coho, sockeye, and Chinook salmon (*Oncorhynchus tshawytschaw*) are the most abundant salmon species. These species usually remain in freshwater for 1-4 years before smolting and can be vulnerable to pike predation during the entire time. Chum salmon (*Oncorhynchus keta*) and pink salmon (*Oncorhynchus gorbuscha*) are more prevalent in the Interior, and these species migrate to sea as fry (Mecklenburg et al. 2002) making them available to pike for only a short time. There have been a few cases where pike have been transplanted to stocked lakes where there is no record of them having prior residence. However, because pike are popular sport fish there, large individuals have been fished out, and smaller pike have not been documented to have an adverse affect on stocked fishes in these lakes (April Behr, personal communication).

Kenai Peninsula) Pike were introduced to Derks Lake in the Soldotna Creek drainage in the mid-1970s. From this introduction, they rapidly spread throughout the remainder of the drainage including East and West Mackey Lakes, Sevena Lake, and Soldotna Creek (Table 3, Figure 7). Historically, the Soldotna Creek drainage and Mackey Lake system had viable populations of rainbow trout, Dolly Varden, coho salmon, and sticklebacks, but now, with the exception of Denise and Sevena lakes, pike are the dominant species. Denise Lake has deep water refugia so rainbow trout and coho salmon still survive there. Pike destroyed the fish community in Sevena Lake, but resident fishes have recently begun to rebound because ADF&G control netting programs have reduced pike abundances in this lake (Rob Massengill and Kristine Dunker, personal observations). There are considerable public and Departmental concerns that pike will become established in the mainstem of the Kenai River and negatively impact the river's world renowned salmon and trout populations. To date, pike are not known to spawn in the Kenai River. The Kenai River is a swift-moving river, and contains little suitable

spawning habitat for pike. Despite this, pike have used the Kenai River as a migratory corridor.

5.3 Consequences of Inaction

If actions are not taken to control and/ or eradicate northern pike in waters outside their native range, continued adverse impacts to Alaska's environment and economy are certain. Failure to educate the public about the consequences of illegal pike introductions may result in a higher than acceptable risk that pike will continue to be illegally introduced by well-intentioned, but uninformed people. If the public is not educated and aware of the dangers of illegal pike and/or other ANS introductions, they may continue transferring ANS, compounding the ecological and economic impacts. If actions to control or eradicate pike are not undertaken, salmonids, other native fishes, amphibians, waterfowl, mammals, and the general ecology of invaded systems will continue to be impacted. Alaska's economy is based on natural resources, and the fish and wildlife resources of the state are extremely valuable. The decision not to implement pike control programs would ensure the continued loss of economically important fisheries and eliminate any possibility of restoring fisheries that have already been destroyed. As fisheries lose viability, angling-related tourism will decline, resulting in tremendous losses to the state's economy. Sales of fishing licenses and fishing gear may decline, directly impacting the Department's budget. Reduced funding for ADF&G's programming could ultimately inhibit the Department's ability to carry out its mission to protect, maintain, and improve the fish, game, and aquatic plant resources of the state, and manage their use and development for the maximum benefit of Alaskans, consistent with the sustained yield principle.

Techniques used to control pike in Alaska to include.

Gillnetting, Sterilization, Winterkill, Bounty, Use of Chemicals eg. Rotenone. Prey manipulation, discontinue lake enhancement, dewatering and passage restrictions.

Of the above option Gill netting is in use on the Corrib and has been effective in the past. It is a simple process and if done at the correct time of year produces minimal bycatch. If manpower becomes an issue then the riparian stake holders will fill this gap as they are already netting, stripping and releasing the trout unharmed on the Owenriff system and releasing there trout fry in the upper Owenriff to mitigate against pike predation.

When a comparison is made between Alaska and Ireland the control of pike as an ANS is paramount to the success of any salmonoid fishery where they reside.

Lough Corrib Pike and Salmonoids (Trout & Salmon) being demersal in nature would explains why strategic gill netting has been so successful in the control of pike on the open waters of Lough Corrib. When the pike biomass is consentrated during spawning

this has been the most effective time to use this control measure. Since its inception in 1898 and continuing to the present day.

The world wide reputation that the Corrib has gained as a game fishery has been hard won over 120 years by the riparian stake holders and Inland Fisheries Ireland in its many incarnations since the Irish states foundation.

Options for Lough Corrib as a System.

1. Simply do nothing and the Corrib will revert back to the lake circa 1898 and become dominated by Pike. It must be noted that the pike lobby on a regular bases reference that the Author Kingsmill Moore in "A Man May Fish" states he left the lake due declining trout numbers, what they dont say is no pike control measures were in place from 1926 to 1936 he last fished the lake in 1936.

The first major pike control took place in 1952, 53 and 54 and in a few short years a major increase in trout number was reported in the subsequent years.

Pike eradication is not a meaningful goal post pike introduction, pike fecundity and given the Corrib's morphology this was never a realistic goal, mitigation has been proven to be successful.

2. Continue with the strategic gill netting programme that has been lead to so much success, rod caught pike could be retained if angler chooses to, but this could not be a stand alone strategy as the tendency of anglers to keep larger fish and return the smaller ones. But pike can mature as old as 2 years so little might be gained but it would be a good adjunct to gill netting.

3. The Corrib must be managed on its own merits and to have a one size fits all has no logic, salmon quota is allocated on a fishery by fishery bases. To have a 1 fish 50cm limit for pike on the Corrib is simply crazy when removal of pike is so crucial to the systems future success.

Pike do not coincide well with other species in:

Spain, Algeria, Morocco, Tunisia, Isle of Man, Uganda, in the US in California, Alaska, Wyoming, Montana, Idaho, Arizona Missouri and Nebraska

So how could this happen in a Salmonoid fishery in the western part of Ireland when it did not happen in that same fishery 120 years previous.?

Ms AM Canavan

Oughterard Anglers and Boatmens Association.