ONTARIO FEDERATION
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Ontario Conservation Centre

OFAH FILE: 420A
September 26, 2023

Ministry of Natural Resources and Forestry
300 Water Street, 1st Floor, South Tower
Peterborough, Ontario
K9J 3C7

RE: Enable Jade Perch (*Scortum barcoo*) culture/sale in Ontario under an Aquaculture Licence by updating Schedule B of Ontario Regulation 664/98 (Fish Licensing Regulation)

The Ontario Federation of Anglers and Hunters (OFAH) is Ontario's largest, non-profit, fish and wildlife conservation-based organization, representing 100,000 members, subscribers and supporters, and 725 member clubs. The Ministry of Natural Resources and Forestry (MNRF) is proposing an amendment to the *Fish Licensing Regulations* made under the *Fish and Wildlife Conservation Act* (FWCA) to add Jade Perch (*Scortum barcoo*) to the list of species that are eligible for aquaculture in the province. Based on the risk assessment done by Ontario's Introductions and Transfers Committee (OITC), we feel the evaluation for Jade Perch is data deficient and encourage the Ministry to consider our feedback prior to moving forward with this proposal.

Evidence of unwanted introductions

The OFAH finds the statement in the application, "there is no record of jade perch being introduced to any other wild ecosystem," to be inaccurate. For example, in Lintermans' 2004 assessment on *Human-assisted dispersal of alien freshwater fish in Australia*, Jade Perch was documented as one of many other native species that have been translocated across Australia. Similarly, Rahim et al. (2013) lists the Jade Perch as an alien freshwater fish species that has been introduced into Malaysia. Incorrect statements like these lead us to believe that the applicant has not thoroughly reviewed the literature or may be intentionally providing misleading information to the Ministry.

Selling of live fish

While the Secretariat of the Convention on Biological Diversity (2010) reports some jurisdictions have restricted the import of Jade Perch due to ecological concerns, Ontario is seeking out opportunities for listing them as an eligible species for aquaculture. Assuming operators follow their licence conditions and all other relevant rules, and coupled with routine inspection, there will likely be sufficient protective measures in place at the facility level to avoid escapees and unwanted introductions from occurring. However, possibly our biggest concern, is at the retailer level where Jade Perch might be sold to live markets and where buyers in turn could purchase and unlawfully stock fish or release them for cultural/ceremonial purposes. If the MNRF moves forward with this proposal, we request that a licence condition be implemented that only permits the movement of dead fish beyond the facility for the purposes of resale.

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Ecological risks and impacts

The ecological consequence of an intentional or unintentional release of Jade Perch into Ontario waters is a big unknown. Combined with a lack of Ministry staffing, resourcing, and enforcement capacity to monitor the commercial chain of custody, there appears to be too many risks to our aquatic ecosystems. Similarly, the Aquaculture Stewardship Council (ASC) (2023) paused their assessment on Jade Perch to be included in their program due to the lack of sufficient scientific data and producer input. Only until sufficient supplementary information has been gathered will the ASC reinitiate this project. For these reasons, we recommend further research be done prior to adding Jade Perch to Schedule B of the *Fish Licensing Regulations*.

From our findings, introductions of Jade Perch in some regions are thought to be responsible for disrupting aquatic communities due to predation of small native fish, larva, and zooplankton (Secretariat of the Convention on Biological Diversity, 2010). Among other alien species, Jade Perch gives cause for concern as it has the potential to degrade aquatic ecosystems (Lintermans, 2004; Koehn and MacKenzie, 2004) and influence the diversity, structure of fish assemblages, and the composition of native communities (Rahim et al. 2013).

Jade Perch are known to have a broad climate suitability, can tolerate temperatures ranging from 10 to 30ºC (Lawson et al. 2012), which is comparable to other high-risk aquatic invasive species (e.g., Silver Carp), and are described by the MNRF as "voracious feeders." This leads us to believe that the ecological threat of Jade Perch is quite possibly much higher compared to the determinations of OITC's risk assessment report. Moreover, there are uncertainties regarding climate change and the effects on future habitat suitability in Ontario waters that haven't been fully considered in the risk assessment profile for Jade Perch.

Disease concerns

While we recognize there is extensive disease testing and reporting and disease-free status requirements in Canada, Herath et al. (2021) cited an example where Jade Perch were imported from Australia to Thailand but were unknowingly infected with a ranavirus which led to an outbreak of ulcerative disease. Ranaviruses can affect fish, as well as amphibians and reptiles, and is the likely cause of a number of major die-offs in amphibian populations due to extremely high mortality rates ranging between ninety to one hundred percent (Canadian Wildlife Health Cooperative, 2023). If the MNRF moves forward with the proposal, we recommend leveraging licence conditions in the relevant legislation (i.e., FWCA, Ontario Fishery Regulations) to outline additional and more extensive disease testing and reporting requirements for epizootic haematopoietic necrosis virus (EHNv) and any other relevant species under the *Ranavirus* genus.

Most of the ecological and genetic risk assessment for Jade Perch was determined to be "reasonably uncertain" including the final risk estimate for the probability and consequences of establishment. The risk assessment goes on to explain that "element ratings should be supported with data and references," but this information is largely absent. Part 2, "parasite and fellow traveler risk assessment," was determined to be low risk but "very certain." However, we are left wondering if EHNv was sufficiently prioritized in the evaluation process, especially when considering previous documented outbreaks.

Closing remarks

OFAH's Fisheries Advisory Committee identified that facility locations should avoid any sensitive species at risk and their habitats. Aside from general uneasiness around Jade Perch and their potential impacts on the health of native species in Ontario, the committee questioned what thresholds and science were considered in the risk assessment. How is the data and information scaled in the evaluation process to justify the determinations?

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Due to these uncertainties and potential ecological risk, we feel strongly that more research is needed prior to further consideration of this proposal. There is documented evidence of unwanted introductions of Jade Perch into regions where they are not indigenous and studies suggesting there are conservation concerns if they were to be released and become established where they are non-native. We appreciate growth and diversity in Ontario's economy, but not at the expense of our invaluable fisheries resources. Thank you for considering our comments.

Yours in Conservation,

Adam Weir
Fisheries Biologist

AW/jb

cc: OFAH Board of Directors
OFAH Fisheries Advisory Committee
Angelo Lombardo, OFAH Executive Director
Matt DeMille, OFAH Director, Policy & Programs
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