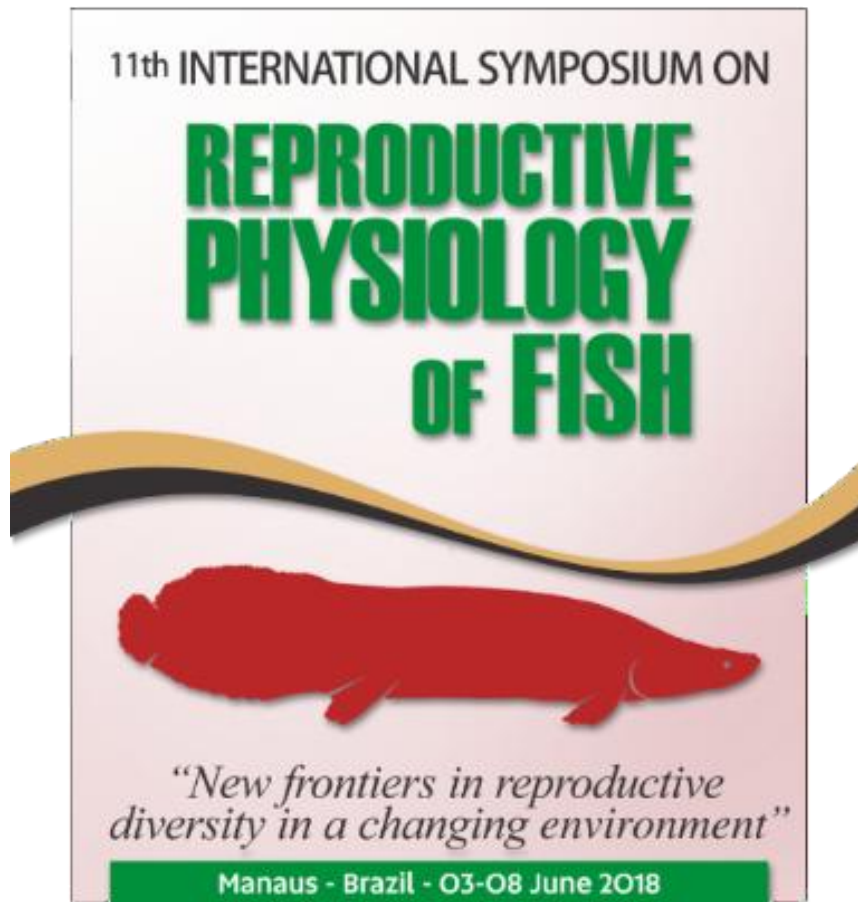


# PROGRAM AND ABSTRACTS



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**REPEATED USE OF FEMALE TAMBAQUI (*Colossoma macropomum*) Breeders In The Same Cycle**

Telles-Lima, A.<sup>(1)</sup>, Freitas R. A.<sup>(3)</sup>, Kuradomi, R. Y.<sup>(4)</sup> Almeida, Fernanda L.<sup>(1, 2)</sup>

<sup>(1)</sup> Programa de Pós Graduação em Ciências Pesqueiras nos Trópicos, Universidade Federal do Amazonas, Manaus-AM, Brazil; <sup>(2)</sup> Centro de Tecnologia, Treinamento e Produção em Aquicultura, Presidente Figueiredo-AM, Brazil, <sup>(3)</sup> Programa de Pós Graduação em Aquicultura UniNilton Lins/INPA, Manaus-AM, Brazil; <sup>(4)</sup>Embrapa Amazônia Ocidental, Manaus-AM, Brazil; E-mail: alinetelles2014@yahoo.com.br

**Introduction**

The tambaqui (*Colossoma macropomum*) is an Amazonian characid widely exploited commercially in Brazil and neighboring countries. The species occupies the second position in the national rank, with 28.1% of the total fish production. The reproduction of tambaqui starts in August/September and lasts until February. Like any reophilic species, in captivity the tambaqui spawns only by hormonal induction. Today we are aware that these protocols do not optimize the use of broodstock, since each breeder is used only once in each cycle/year and then separated to "rest" until the next cycle. The objective of the present study was to evaluate the possibility of a continuous use of tambaqui females in the same cycle, contributing to the development of new technologies for the production of the species.

**Methods**

Six females (3.5 years old;  $5.16 \pm 0.81$  kg body weight-BW) were used in this study. The external reproductive features were observed (hyperemic urogenital papilla and bulging abdomen) and a small sample of oocytes were collected by cannulation. Then, they were induced by crude carp pituitary extract (6% BW) for the first time and after 60 days. The eggs of each female were fertilized by the milt of the same male in both inductions. The spawning index (SI) or relative fecundity, number of oocytes per g of egg (No/g), fertilization index (FI) and hatching index (HI) were evaluated. The mean values of the first and second spawning were compared by the *t* test.

**Results and Discussion**

All six females responded positively to the two hormonal inductions. The SI (10.9% and 12.3%), No/g (1,662 and 1,538), FI (89.8% and 84.4%) and HI (92.2% and 92%) were not different between the first and second inductions (respectively). Moreover, one female had an SI of 12.2% and 19.7% in the first and second stripping, respectively, values higher than the average reported for tambaqui. The number of oocytes per g of egg was also superior to other studies. The average of hatch index of both spawns was above 92%. Altogether, these results show that females tambaqui can be induced and stripped at least within 2 months apart without affecting the quantity or quality of the eggs obtained.

**Conclusion**

The repeated use of tambaqui breeder in the same cycle is feasible and do not interfere with egg quality. More studies are being developed now to check if this return to fertility is due to a rapid (2 mo) ovarian recrudescence or if in captivity the spawning of tambaqui is in batches/incomplete. In any case, these results are of high value for the tambaqui industry since they show that each female can be induced and stripped at least twice per cycle.