The brain-pituitary axis in *Steindachneridion parahybae* (Siluriformes: Pimelodidae) females when reproductive migration is blocked

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Steindachneridion parahybae is a freshwater catfish endemic to the Paraíba do Sul River Basin, Brazil. This species has been seriously threatened by environmental disturbances in the last several decades. Gonadotropin-releasing hormone (GnRH) is the main regulator of follicle stimulating hormone (FSH) and luteinizing hormone (LH) release from pituitary. We investigated the GnRH neurons, FSH and LH cells in *S. parahybae* from sexually mature females in captivity. The brains and pituitary were dissected, fixed in Bouin, embedded in paraffin and longitudinal and transverse sections were prepared and visualized by immunocytochemistry and histology. The molecular weight (MW) was measured by western blotting. Neurons immunostained with cfGAP and cfGnRH were found in the forebrain region, extending in rostrocaudal direction from telencephalon to the caudal hypothalamus. cfGAP was strongly immunoreactive in ventral hypothalamus fibers and hypophyseal stalk, mainly in proximal pars distalis in adenohypophysis. cIIGAP-immunoreactive appeared to be restricted to the anterior dorsal midbrain tegmentum area, close to the ventricular surface. Positive immunostaining was observed only for LH with mummichog antisera. The MW suggested was 18kda (FSH) and 19kda (LH). The data will provide us with important tools for further investigations on the neuroendocrinology and reproduction in this catfish, considering the threatened species situation.