STUDY ON INDUCED BREEDING IN GUPPY, *Poecilia reticulate* BY GNRH HORMONE INJECTION

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Guppy, *Poecilia reticulate* is the one of most popular and easiest ornamental fish species to keep in aquaria as they are easy to breed, hardy, tolerate wide range of temperatures, salinity, pH and hardness.

However, induced breeding of Guppy is still not done in Sri Lanka. Guppies engage in the internal fertilization. They are livebearers. The females' eggs are fertilized while in their follicles and they hatch out from them just before the birth. The anal fin of the male fish is used to inseminate the female fish. Once inseminated, the female fish store sperm in her body for several months. It can be produced multiple broods without the need for further fertilization.

The main objective of this study was to evaluate the success of induced breeding of Guppy rather than the natural breeding. Hormones are given to fish body through intramuscular or intraperitoneal injection. Intramuscular injection is given in to the area between the dorsal fin base and the lateral line. Intraperitoneal injection is given at the base of the pectoral or pelvic fin.

Gonadotropin Releasing Hormone (GnRH) was used for induced breeding through intramuscular injection. An attempt has been made to determine the effect of GnRH on the fecundity and gestation period of female Guppy .0.0025 mg GnRH was used for inject to one female fish. Ten Females for five male fish were taken for the experiment. Same sample size was taken as control. Ten female were injected on 6th of May 2013. The results revealed that injected female fish laid about ten off-springs within a week. As well as naturally breeding female fish laid about ten off-springs within three weeks indicating the possibility of the usage of induced breeding for improved breeding.

Key words: *Guppy, Induced breeding, Gonadotropin Releasing Hormone (GnRH), Sri Lanka*