

STUDY TO COMPARE THE EFFECTS OF CONDITIONING ON EXTERNAL PARASITIC FAUNA OF GUPPY, *POECILIA RETICULATA*

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About 60% of the ornamental fish exported from Sri Lanka consist of guppy *Poecilia reticulata*, which gives income to small-scale farmers through buy-back system operated by large-scale producers and exporters. In order to supply quality fish for export market, exporters are practicing their own techniques where there is a conditioning of fish prior to the shipment with a certain procedure to remove or reduce the risk of diseases at arrival.

The objective of the project was to estimate the effect of conditioning on the prevalence of external parasites in guppy. A total of 576 export quality guppies were collected from two exporters as two monthly samples one before and one after conditioning for six months from November 2002 to May 2003. Each sample was sub-sampled and one sub-sample was examined for parasites immediately while the other sub-sample was packed in simulated condition to be exported and kept at room temperature for 40 hrs. The fish were also examined for external parasites using standard procedures for necropsy.

Eight genera of the protozoan parasites (*Tetrahymena*, *Chilodenella*, *Ichtyobodo*, *Trichodina*, *Ichthophthirus*, *Amyloodinium*, *Apiosoma* and *Zoothamnium* like organisms) and two genera of monogenean trematodes (*Gyrodactylus* and *Dactylogyrus*) were identified, but a protozoan could not be identified. The variation between two exporters of the prevalence among different parasites was statistically significant ($H > P$). In both exporters prevalence of different parasites at immediate examination before conditioning and after conditioning was statistically significant ($H > P$). In one exporter prevalence of different parasites at examination of 40 hrs of packing before conditioning and after conditioning was not statistically significant ($P > H$). There was significant difference between prevalence of parasites at the immediate examination and examination after 40 hrs from both exporters. *Apiosoma* and *Zoothamnium* like organism were found only from one exporter without conditioned when packed for 40 hrs. *Gyrodactylus* and *Dactylogyrus* were found only in one exporter and not found after 40 hrs of conditioning.

Since the prevalence of parasites after 40 hrs of packing was not statistically different from that of without packing from one exporter, parasites do not multiply at latent stage, where as in other exporter it was vice versa. As the prevalence of parasites before conditioning and after conditioning was not same to both exporters, there is no standard conditioning procedure to remove the parasites. Therefore, It is suggested to formulate the better conditioning procedure to remove the parasites at the minimum cost without misusing the chemicals.

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